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Experimental Evaluation of Two Turning Vane Designs for Fan Drive Corner of 0.1-Scale Model of NASA Lewis Research Center's Proposed Altitude Wind Tunnel

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Donald R. Boldman,
Royce D. Moore,
and Rickey J. Shyne

Lewis Research Center
Cleveland, Ohio

National Aeronautics and Space Administration

Scientific and Technical Information Branch

Summary

Two turning vane designs were experimentally evaluated for corner 2 of a 0.1-scale model of the NASA Lewis Research Center's proposed Altitude Wind Tunnel (AWT). Corner 2 contained a simulated shaft fairing for a fan drive system to be located downstream of the corner. The corner was tested with a bellmouth inlet followed by a 0.1-scale model of the crossleg diffuser designed to connect corners 1 and 2 of the AWT. Vane A was a controlled-diffusion airfoil shape; vane B was a circular-arc airfoil shape. The A vanes were tested in several arrangements which included the resetting of the vane angle by $-5°$ or the removal of the outer vane. For corner 2, with inlet Mach numbers of 0.12 to 0.29, the lowest total-pressure loss for vane A configurations was obtained at the negative reset angle. The loss coefficient increased slightly with Mach number, ranging from 0.165 to 0.175 with a loss coefficient of 0.170 at the inlet design Mach number of 0.24. Removal of the outer vane did not alter the loss. Vane B loss coefficients were essentially the same as those for the reset vane A configurations. At the inlet design Mach number, the presence of the fan shaft fairing accounted for approximately 14 to 31 percent of the total corner 2 loss depending on the particular vane configuration. The crossleg diffuser loss coefficient was 0.018 at the inlet design Mach number of 0.33.

Introduction

It has been proposed that the inactive Altitude Wind Tunnel (AWT) at the NASA Lewis Research Center be rehabilitated to meet the aeropropulsion needs of the future. The proposed program would extend the capabilities of the tunnel to permit testing at Mach numbers above 0.90. The tunnel would accommodate tests involving fuel-burning engines, adverse weather conditions, and acoustics. The internal components of the tunnel were removed when it was converted to altitude test chambers for space research in the late 1950's and early 1960's. Therefore, the proposed AWT would require all new internal components. In addition to a new test section and heat exchanger, four new sets of turning vanes and a new two-stage fan drive system would be required. A schematic of the proposed tunnel is given in figure 1. Corner 1 (downstream of the test section) would have an engine exhaust removal scoop extending through the center of the turning vanes. The fan drive shaft fairing would pass through the corner 2 vanes. Corner 3 and 4 turning vanes would be clean (i.e., no components would pass through the corners). A complete description of the tunnel components is given in references 1 to 3.

Because of the magnitude of the proposed rehabilitation of the AWT, a modeling effort was undertaken to ensure the technical soundness of the new component designs. A 0.1-scale was chosen as the common size for the various components, in part because it represented the upper limit of the Lewis exhauster flow capabilities. After the individual components are tested, they can be assembled as a complete loop to evaluate the interactions of the various components. The results from the corner 1 turning vane investigation were presented in references 4 to 6.

This report presents the results of tests on two turning vane designs proposed for corner 2. The configuration consisted of a crossleg diffuser, the corner turning vanes, the simulated fan drive shaft fairing, and the fan inlet guide vanes (IGV's). Vane A was a controlled-diffusion airfoil design, and vane B was a circular-arc airfoil design. For vane A two vane setting angles were evaluated along with the effects of removing the outer vane. Data were obtained over a range of corner Mach numbers from 0.12 to 0.29, which corresponded to test section Mach numbers of approximately 0.30 to 0.92, respectively. The total-pressure data at the diffuser inlet, at the diffuser exit, at the IGV entrance plane (downstream of the vanes), and at a position downstream of the IGV's were obtained from rakes. Axial wall static-pressure and vane surface-pressure measurements were also obtained. The pressure data are presented in tabular form for all the configurations tested.

Apparatus and Procedure

The corner 2 vane sets were tested with the simulated fan drive shaft fairing in the configuration shown in figure 2. A schematic diagram of the test rig is shown in figure 3. Room air entered the bellmouth and passed through a honeycomb flow straightener and two 1-diameter-long (D = 82.296 cm) spool pieces before reaching the crossleg diffuser. The air was then turned by the corner vanes whereupon it flowed through the variable IGV assembly and three spool pieces before exhausting through a choked-plate assembly to the central altitude exhauster system.

The choked-plate assembly was used for flow control. It included six removable plates and one fixed plate arranged

in the form of a converging nozzle. This assembly of plates provided seven specific flow rates between 35.38 and 86.65 kg/sec. The flow straightener was an aluminum honeycomb with a hexagonal cell pattern. The distance across the flats of the honeycomb was 0.95 cm and the length of the cells was 7.08 cm.

Crossleg Diffuser

The 0.1-scale-model crossleg diffuser was designed to connect corner 1 and corner 2, thus forming the high-speed crossleg of the wind tunnel (fig. 1). The diffuser had an inlet diameter of 82.296 cm and an exit diameter of 94.74 cm with a conical half-angle of 3.25° (fig. 3). Two rake instrumentation stations (inlet and exit) in the diffuser provided the data to determine the total-pressure loss for this component and to establish the inlet conditions for the corner 2 vanes.

Turning Vanes

Two sets of turning vanes were designed for corner 2. The vanes were all of the same height and were mounted in the rectangular corner vane holder as shown in figure 4. There was a flat length of 10.67 cm in the turn for mounting the vanes (fig. 3). The flat section formed a 45° angle with both the inlet corner and exit corner pieces. The major axis of the elliptical corner was 133.99 cm, and the minor axis was 94.74 cm. A foam rubber filler material was used between the vanes to form the elliptical internal flow path. Foam rubber was also used as a filler between the upstream and downstream sections of the fan drive shaft fairing. With the foam between the vanes the vane setting angles could be changed manually without disassembling the corner. Although not included in the present investigation, the vane spacing could be varied also. Both the vane setting angle and spacing variations were individually set for each vane. The fan shaft fairing extended from the outer wall of the corner inlet piece through the turning vanes to the fan as shown in figure 5. The geometry of the fairing is given in figure 6. The shaft fairing extended across the inlet flow, whereas for corner 1 the scoop was aligned with the inlet flow.

Vane A.—Vane A (fig. 7) was a controlled-diffusion airfoil designed by the inverse method of Sanz (ref. 7). An advantage of the inverse design code is that the surface velocity distribution is a direct input. This allows control of the velocity diffusion to eliminate boundary-layer separation. The calculation method accounts for the boundary-layer displacement thickness and adjusts the blade shape to provide manufacturing coordinates as output. A schematic of the vanes along the major axis is given in figure 8. The manufacturing coordinates for these vanes, given in table I, were nearly the same as the coordinates used for corner 1 (ref. 4). The slight differences between vane A coordinates for corners 1 and 2 were the result of slightly different design Mach numbers. The 23 equally spaced vanes had a solidity (aerochord/spacing) of 1.92. The vane aerochord was 10.67 cm. The leading edge of the first vane was 5.987 cm from the outer wall, and the last vane was 5.565 cm from the inner wall. The sketch in figure 8 also shows by dashed lines where the next vanes would have been located with respect to the walls. The orientation of the vane setting angle is shown in the small illustration.

During the testing of vane A, the setting angle of the vanes and the exit angle of the IGV's were changed. The outer vane was also removed for some tests. These changes are listed in table II.

Vane B.—Vane B (fig. 9) was a circular-arc type of vane and was designed by McFarland by the method described in reference 8. McFarland's code solves for a velocity distribution by using a blade-to-blade panel method. The blade coordinates are those used for corner 1 (ref. 4). The vane aerochord was 10.67 cm. These vanes had a solidity of 2.290, which resulted in 28 vanes rather than the 23 vanes used in the vane A configuration. A schematic showing vane B along the major axis is presented in figure 10. The figure also shows by dashed lines where the next vanes would have been positioned. The first vane leading edge was 4.679 cm from the outer corner; the last vane leading edge was 3.576 cm from the inner corner. Vane B was tested only at its design condition. The vane manufacturing coordinates are given in table III.

Inlet Guide Vanes

Twelve IGV's were located downstream of corner 2 as shown in figure 3. These guide vanes, which were uniformly spaced around the circumference, had a chord of 12.35 cm and a maximum thickness equal to 10 percent of the chord. Each guide vane was hinged at the midchord position as shown in figure 11. The front portion of the IGV's was fixed. Adjustments in the angle of the downstream portion of the guide vanes were made in order to change the air inlet angle in the plane where the entrance to the two-stage fan would be located in the AWT. A modest amount of twist was incorporated in order to introduce swirl in the hub region. The swirl, indicated by the design exit flow angle in figure 11(b), ranged from 8.9° at the hub section to 0° at the tip section. The major portion of the test program was performed with the exit angle of the IGV's set at 0°; however, in a limited number of tests the IGV's were set at +10° and −10° (table II).

Instrumentation

The airflow was determined from measurements on the choked-plate nozzle located downstream of the vanes (fig. 3). The choked-plate assembly was used to set seven specific flows. To increase the flow, the last plate was removed, and the preceding plate kept in place.

To determine the overall performance of the diffuser, diametrical rakes (fig. 12) were used at the diffuser upstream and downstream stations (fig. 13). These rakes could be moved to four positions around the circumference (0°, 315°, 270°, and 225°-clockwise looking downstream). The rakes

contained 16 total-pressure elements and 6 total-temperature elements. Boundary-layer rakes (fig. 14) were also installed at the upstream and downstream stations. Outer wall static-pressure taps were located at approximately the same axial planes as the rakes. The overall performance of the corner was determined from the diffuser exit diametrical rakes and total-pressure rakes mounted on the IGV leading edge (fig. 15). Each of the 12 IGV's had a 5-element total-pressure rake. Four radial rakes (fig. 16) were located downstream of the IGV's. These rakes could be moved to three circumferential positions.

Other wall static-pressure taps were installed in the spool pieces, diffuser, shaft fairing, and corner. The axial and circumferential locations of the taps are given in figure 13.

Vane performance was evaluated from surface static pressures obtained from taps on adjacent vanes at four sections (fig. 17). Two of the sections were along the major axis near the inside and outside corners (A and D in fig. 17); one was midway between the fairing and the bottom of the middle vanes (C). The fourth section (B) was located at 22 percent of the passage height from the top of the middle vanes.

Flow conditions were visually indicated by tufts which were taped to the walls of the diffuser and corner, as well as the fan drive shaft fairing.

All rake total-pressure measurements and static-pressure measurements were recorded by individual transducers which were calibrated just before each reading. The temperatures were determined from Chromel-constantan thermocouples by using a floating-point temperature reference.

Test Procedure

For a given vane configuration, the desired airflow was set by adjusting the choked-plate assembly. The diffuser upstream diametrical rake was positioned in the instrument ring at either 0° or 225° (clockwise looking downstream). The inlet boundary-layer rakes were positioned 90° from the large upstream rake. The downstream rake was positioned at either 225° or 0° (opposite the upstream rake position). The diametrical and boundary-layer rakes were rotated to four positions to provide radial distributions of total pressure at eight equally spaced circumferential positions. The outlet boundary-layer rakes were also positioned 90° from the large downstream rake. The four IGV exit rakes were positioned 90° apart and rotated to three positions, thus providing radial distributions of total pressure at 12 equally spaced circumferential positions. At each circumferential position the rakes were located midway in the gap between adjacent vanes. Data were recorded at the particular rake position. The facility was then shut down, and all of the diametrical and boundary-layer rakes were indexed manually 45°. The IGV exit rakes were indexed manually 30°. The flow rate was reestablished and data were then recorded at the next rake position. This procedure was repeated until data were recorded at the four diametrical and boundary-layer rake positions and the three IGV rake positions. The upstream and downstream rakes were rotated in opposite directions to minimize the effect of the upstream rake wake on the downstream pressure measurement. All of the static pressures, as well as the IGV leading-edge total pressures, were recorded at each rake position.

Calculation Procedure

The IGV leading-edge total pressures and all static pressures recorded at the four rake positions were arithmetically averaged and corrected to standard-day conditions at the IGV inlet plane to obtain the values presented in this report.

The total-pressure measurements from the rakes were arranged for a given point to form arrays of total pressure at a given circumferential location and given percent span (from the outer wall) locations. The data from the boundary-layer rakes were rearranged in a similar manner. The total pressures from the rakes were each area averaged to obtain the overall values. The boundary-layer-rake data were not included in the averages.

The airflow was calculated from Fliegner's formula (ref. 9) for a choked flow by using measured values of nozzle total pressure and total temperature. This calculated airflow agreed within 2 percent of the mass-averaged airflow calculated from limited cases in which very detailed flow surveys were made. The velocity head and the average inlet and exit Mach numbers were based on the calculated airflow. Total pressure, static pressure, total temperature, velocity head, and airflow were all corrected to standard-day conditions based on the IGV inlet condition.

The symbols and equations used in the calculations are presented in appendixes A and B, respectively.

Results and Discussion

The results are presented in three main sections: overall total-pressure losses, wall static-pressure distributions, and vane-surface Mach number distributions. The results for all four of the vane A configurations and the vane B configuration are presented in the tables. These data include the results obtained for IGV exit angles of 0°, +10°, and −10°. Note that the IGV setting angles had a negligible effect on the IGV rake data since the rakes were fixed circumferentially between the IGV's. Complete wake surveys behind the IGV's were not obtained as part of the present test program. Since the IGV exit angle parameter had such a small effect on the results, the data plots presented herein represent only the results at an IGV exit setting angle of 0°. Also, since the volume of data for all vane configurations and related parameters is extensive, these data plots will focus primarily on the results for vanes A and B at design conditions and for an optimized vane A configuration (vane A4). The diffuser and corner 2 loss coefficients will be shown for all corner 2 vane designs.

The overall performance for corner 2, based on the wake

measurements, is summarized in table IV. The total-pressure data are presented in tables V and VI. The wall axial static-pressure data are presented in tables VII and VIII. The vane inlet and exit circumferential distributions of static pressure are presented in table IX. The vane-surface static-pressure data are presented in table X.

In table IV a slightly negative pressure loss (and loss coefficient) are shown for the IGV's. These negative values are, in part, attributable to the placement of the downstream pressure rakes. Since the downstream (free stream) rakes were offset 15° from the inlet leading-edge rakes, they did not sense the large pressure drop around 90° in the tip region (inside corner). Consequently, the integrated value of total pressure downstream of the IGV's was slightly higher than the integrated value at the inlet.

In this report the design Mach numbers for the diffuser inlet and corner 2 inlet are given as 0.33 and 0.24, respectively. In related papers (refs. 4 to 6) the indicated design Mach numbers for these components may differ slightly from the above values. These design values can vary depending on the particular loss models used in the design code and on the amount of flow removed from the test section with the plenum evacuation system. Therefore, the design Mach numbers for the crossleg diffuser and corner 2 inlet should be considered nominal values consistent with a test section Mach number of 0.8.

Overall Performance

The overall total-pressure loss coefficients for the diffuser and for corner 2 are presented in figure 18. Data for each component are presented as functions of the inlet Mach numbers. The loss coefficient for these components was based on diametrical rake measurements at stations 34 and 47 for the diffuser and at stations 47 and 79 for corner 2 (fig. 13). The data are presented for all of the corner 2 vane configurations. The loss coefficients given below are based on a least-squares fit of the data.

The diffuser loss coefficient increased only slightly with increasing Mach number, ranging from 0.013 at Mach 0.16 to 0.020 at Mach 0.40 as shown in figure 18(a). The diffuser loss was also independent of the vane configuration in corner 2. This latter result was anticipated because the diffuser was located upstream of corner 2. At the diffuser inlet design Mach number of 0.33, the loss coefficient was only 0.018. A low value of total-pressure loss coefficient was obtained because the flow in the diffuser remained attached, and the loss was due only to skin friction.

As in the diffuser, the loss coefficients for corner 2 with the various vane configurations (table II) increased slightly with increasing Mach number (fig. 18(b)). Two distinct loss levels were evident, with higher losses associated with vanes A and A3. The loss coefficient increased from 0.195 at Mach 0.12 to 0.215 at Mach 0.29. The loss coefficient for vanes A2, A4, and B increased from about 0.165 to 0.175 over the same Mach number range. At the corner 2 inlet design Mach number of 0.24 (corresponding to a diffuser inlet Mach number of 0.33 in fig. 18), the loss coefficients were about 0.210 for vanes A and A3 and 0.170 for vanes A2, A4, and B. The highest loss coefficients were associated with the vane A and A3 configurations in which the vanes were set at the design value of setting angle. Resetting the vanes to a negative incidence angle of −5° (turning the exit flow toward the outside of corner 2, (vanes A2 and A4)) achieved a reduction in total-pressure loss coefficient of approximately 20 percent. This corresponds to a reduction in the loss of about 4 percent of the corner 2 inlet dynamic pressure. Similar reductions in loss coefficient were observed for the vane A configurations which were reset by the same amount and were tested in the companion study of corner 1 of the AWT 0.1-scale model (refs. 4 and 5). As in these previous experiments, the vane B configuration was tested only at its design condition because the data, coupled with visual observations of tufts, indicated that flow separation did not occur in the outside region of the corner.

In the lower loss vane A configurations (vanes A2 and A4), the vanes were reset −5°; in the higher loss vane A configurations (vanes A and A2), the vanes were set at the design angle. The outer vane was removed in configurations A2 and A4.

Analysis of the vane A results of corner 1 (ref. 5) (using the two-dimensional inviscid analysis of ref. 8) suggested that removing the outer vane would improve performance. Therefore, when extensive separation was observed in the outside corner region with vane A, the outer vane in corner 2 was removed.

Examination of figure 18(b) clearly reveals that, for the vane A configurations, the strongest factor contributing to the reduction in the corner 2 loss was associated with the change in setting angle and that removal of the outer vane (configurations A2 and A4) had a negligible effect. The corner 2 losses with the vane B configuration were essentially the same as the losses associated with vanes A2 and A4.

An estimate of the effect of the shaft fairing on the corner loss can be obtained if the previously reported loss data for corner 1 (which did not have a centerbody (ref. 4)) are assumed to be applicable to the corner 2 configurations. This assumption should be valid since the geometries and test conditions for the two corners were nearly the same. The appropriate corner 1 loss data were interpolated to obtain loss coefficients for the corner 2 inlet Mach number of 0.24 in the absence of a centerbody. A comparison of the measured loss coefficients for corner 2 with the interpolated loss coefficients of corner 1 indicates that the centerbody in corner 2 accounts for approximately 21 percent of the total loss with vane A, 31 percent with vane A2, and 14 percent with vane B. A similar comparison could not be made for vanes A3 and A4 since comparable configurations were not tested in the experiment of reference 4. The fraction of total loss due to the centerbody with vane A2 is consistent with the fraction

of total loss for corner 1 (vane A10) caused by an exhaust scoop that passed through the corner.

The radial distributions of diffuser inlet and exit total pressure are presented in figure 19 for vanes A, A4, and B for the design Mach number. Although only the data from the circumferential location of 0° are shown, these profiles are typical of all of the other seven circumferential locations. The similarity of the circumferential profiles in the diffuser was the result of a distortion-free inlet flow provided by the upstream experimental arrangement shown in figure 3. The results in figure 19 indicate that the diffuser inlet boundary-layer thickness was nominally 10 percent of the radius. Slightly thicker boundary layers were evident at the diffuser exit station.

Corner 2 exit total-pressure profiles for vane configurations A, A4 and B are presented in figure 20 for the 90° and 270° circumferential positions corresponding to the inside and outside corner regions, respectively. The profiles in the inside corner region are more peaked, with the greatest loss in total pressure occurring near the inside corner (fig. 20(a)). This loss becomes more evident upon comparing the profiles with the inlet total-pressure profile. The peak values of total pressure approach the free-stream value of inlet total pressure in the region of approximately 20 to 50 percent of span. The influence of the centerbody is apparent by the gradual decrease in total pressure in the region beyond 50 percent of the span.

In the outside corner (fig. 20(b)) the flow appears to be more uniformly mixed as evidenced by the symmetry and uniformity of the profiles over much of the span. A reduction in total pressure from the inlet free-stream value is apparent across the entire span. Again, the influence of the centerbody is evidenced by the reduction in total pressure at distances greater than approximately 70 percent of the span. These profiles provide some insight into the nature of the distortion pattern downstream of the major axis of corner 2. This distorted flow passes through the IGV's and would be present at the face of the AWT fan.

To give a better overall picture of the distortion at the inlet and exit of corner 2 (IGV inlet plane), computer-generated contours of the total pressures are in figure 21 for vanes A, A4, and B operating at design conditions. Regions of low contour density and high total pressure represent low loss regions. For example, the diffuser exit profiles for all vane configurations (figs. 21(a), 21(c), and 21(e)) reveal a high density of contours in the wall region, and thus depict the loss in total pressure in the boundary layer. The innermost contour represents the highest pressure, which is constant in the free stream.

The contours at the corner 2 exit are more complicated. A general symmetry about the horizontal axis is apparent, and thus indicates that the upper half of the flow field behaves much like the lower half. However, the contours of exit total pressure for all three vane configurations are asymmetric to various degrees about the vertical centerline. Regions of significant total-pressure gradient exist at the inside corner (90° circumferential location) for all three vane configurations. Also, for all configurations a moderate total-pressure gradient is apparent at 90° and 270° because of the presence of the shaft fairing. Regions of pressure gradient can be observed at the 225° and 315° positions with slightly steeper gradients associated with the A vanes (figs. 21(b) and 21(d)). Vane B produced the largest region of uniform exit flow; however, this extensive region of uniform core flow was at a slightly lower total pressure than much of the core flow for vane A4 (figs. 21(d) and 21(f)). This lower pressure is possibly the result of a higher two-dimensional loss associated with the B vanes, as suggested in references 5 and 6. The fact that the overall corner losses were the same for vanes A4 and B can be qualitatively rationalized on the basis of a tradeoff between greater circumferential uniformity at a slightly reduced total pressure (vane B) and better two-dimensional pressure recovery over a smaller region of the core flow (vane A4).

Static Pressure Distribution

The axial wall static-pressure distributions upstream and downstream of corner 2 are shown in figure 22. The distributions are presented for the 90° and 270° positions and for vanes A, A4, and B. The static pressures in the constant area duct and diffuser are quite similar, with a slight flow acceleration (reduction in static pressure because of boundary layer growth) in the straight duct and deceleration (increase in static pressure) in the diffuser (fig. 22(a)). The static pressures at the 90° and 270° positions in the diffuser were nearly equal, and thus implied circumferential uniformity. The total pressures at the diffuser exit were also uniform as shown previously in figure 19 and in the supplemental data contained in the tables. The combined uniformity of static and total pressures indicated a distortion-free flow at the inlet to corner 2.

The limited number of pressure taps downstream of corner 2 reveal a nearly constant static pressure along the outside wall (270° position) as shown in figure 22(b). The static pressures at the 90° position were lower than corresponding pressures at the 270° position at Z = 19.6 cm. All of these data reveal only a weak dependence on vane configuration.

The wall static pressure distributions at the 270° position in corner 2 are presented in figure 23 for vanes A, A4, and B. The fan shaft fairing caused an increase in static pressure in the region $0 < X < 40$ cm. Closer to the fairing the static pressures approach the stagnation pressure. At X = 85 cm the static pressure dropped again as the flow accelerated over the fairing and continued to decrease through the vane row downstream to Z = −71 cm. Farther downstream, with vanes A4 and B, the flow in the outside corner continued to accelerate; however, a pressure rise was observed with the vane A configuration. This pressure rise, or diffusion of the flow, was attributed to the converging-diverging nozzle formed between the outside corner and the first vane. Similar results were observed for vane A in corner 1 (ref. 4). In the corner 1

study tufts in the wall indicated that the flow in the outside corner was separated for the vane A configuration.

The circumferential distribution of wall static-pressure coefficient 5.34 cm upstream and downstream of the vane row is presented in figure 24 for vanes A, A4, and B. Higher values of pressure coefficient are indicative of lower values of static pressure. In the plane of the inlet row of static taps, the pressure coefficient tends to be somewhat more uniform, with a nominal value of 1.0 (i.e., the difference between the stagnation and wall static pressures is about equal to the dynamic head at the entrance to corner 2). The depression in the inlet static-pressure coefficient at the 270° position is attributed to separation of the flow at the downstream edge of the shaft fairing. The separation was indicated by tufts attached to the surface of the fairing.

Circumferential distributions of wall static-pressure coefficient derived from the exit row of pressure tap data were less uniform than the distributions described above for the inlet plane (fig. 24). The exit pressure distributions were nearly the same around the inside half of the corner (0° to 180°) for the three vane configurations. Differences can be noted in the outside half of the corner (180° to 360°). The outside corner static pressure was higher for vane A than for vanes A4 and B, which indicates a lower static pressure for vane A. As shown previously in figure 23, these low static pressures at the 270° position were followed by a rapid rise in pressure as the flow progressed downstream and ultimately resulted in separation.

The axial distribution of static pressure on the shaft fairing is shown in figure 25 for vane A4. In the region $Z < -40$ cm, low static pressures were observed at circumferential positions of 0° and 180°, a result of an acceleration of the flow in the maximum thickness portion of the fairing. High static pressures were evident at the 90° position as a result of flow stagnation at the leading edge of the fairing. An intermediate level of static pressure, approximately equal to the free-stream static pressure, was observed at the trailing edge of the fairing (270° position). Downstream of the vane row, the static pressures on the fairing continued to drop over most of the region which indicated acceleration. The acceleration of the flow was caused by an increase in blockage as the cross section of the fairing changed from biconvex to circular. (Refer to fig. 6.) The decelerating flow at the 0° and 180° positions immediately downstream of the vane row is possibly the result of three-dimensional effects of the flow in the corner region formed by the vane downstream suction surface and the fairing. Pressures at the top and bottom of the fairing were essentially equal, as were the pressures at the edges of the fairing.

Vane Surface Mach Number Distribution

The design surface Mach number distributions for vanes A and B are compared to experimental values at section C in figure 26. The design distributions were adjusted to match the experimental corner 2 inlet Mach number of 0.24, which was lower than the values used in the design calculations. (Design calculations were performed at Mach numbers of 0.265 and 0.350 for vanes A and B, respectively.) This adjustment was made by assuming the design value of the pressure coefficient at a given point on the vane was invariant with the inlet Mach number. Data from the vane passage at section C (lower middle of the vane set) were chosen for this comparison because the flow in this region was expected to be representative of the two-dimensional flow assumed in the design procedure. In general, the design and experimental distributions of Mach number were in good agreement except near the trailing edge of vane B where separation occurred. This separation is evidenced by the drop in experimental Mach number relative to the design distribution which commences at approximately the 85 percent aerochord position (fig. 26(b)).

Vane A experimental and design Mach number distributions for vane sections A to D are shown in figure 27. As expected, the distributions at sections B and C were nearly the same and in good agreement with design, since the flow in these regions was most representative of two-dimensional flow. The greatest deviation from design was observed at sections A and D which were near the outside and inside corners, respectively. The experimental surface Mach numbers near the inside corner (section D) were appreciably lower than design values over most of the airfoil; whereas, near the outside corner (section A) the experimental Mach numbers were higher than design values. The higher observed Mach numbers near the outside corner imply a higher than design value of incidence angle. Conversely, near the inside corner, the flow incidence angle may be negative relative to the design value.

A comparison of experimental and design surface Mach number distributions at sections A to D are presented in figure 28 for vane A4 (vane A reset −5° and the outside vane removed). At sections B and C (two-dimensional flow) the most pronounced effect of resetting the vanes was near the leading edge on the pressure surface where higher Mach numbers can be noted relative to the vane A results. (Compare with fig. 27(b) and (c).) In the outside corner (section A) the peak suction-surface Mach number was reduced by the combined effects of a reset angle and the removal of the outer vane; whereas, at the inside corner (section D) the peak suction surface Mach number was increased. Again, the principal benefits of modifying the setting angle for the vane A configuration were a better uniformity in the Mach number distributions across the vane row and a reduced tendency for flow separation in the outside corner. The exit Mach numbers at the four sections were essentially the same as with vane A4 except that vane A showed variation, especially near the outside corner. The benefits of resetting the angle were reduced total-pressure loss for the corner and better corner 2 exit flow uniformity. Recall that the vane A2 configuration also provided the same low loss levels observed for vanes A4 and B. The only difference between configurations A2 and A4 was that in the latter configuration the outside vane was removed.

In figure 29 a corresponding comparison of Mach number distributions at the four sections was made for vane B. The

experimental distributions at all four sections were in good agreement with the design over much of the airfoil; however, on the suction surface downstream of the 85 percent aerochord point, separation is apparent. This separation is evidenced by the drop in experimental Mach number relative to the design distribution. The separation occurred at all four sections; moreover, the extent of the separated flow was nearly the same at the four sections, and the Mach number distributions were quite similar. This result tends to support the data shown in figure 21(c) which indicates that the exit flow was relatively uniform in the annular region of the corner 2 exit plane. This exit flow uniformity appears to be a direct result of the similarity in vane performance across the vane row. Although some separation was apparent, the vanes performed similarly across the entire corner.

Summary of Results

Two turning vane designs were experimentally evaluated for corner 2 of a 0.1-scale model of NASA Lewis Research Center's proposed Altitude Wind Tunnel (AWT). Corner 2 contained a simulated shaft fairing for a fan drive system to be located just downstream of the corner. The corner was tested with a bellmouth inlet followed by a 0.1-scale model of the crossleg diffuser designed to connect corners 1 and 2 of the AWT. Vane A was a controlled-diffusion airfoil design shape; vane B was a circular-arc airfoil shape. Vane A was tested in four configurations: (1) all vanes set at the design angle (vane A); (2) all vanes reset $-5°$ (vane A2); (3) all vanes set at design conditions with the outside vane removed (vane A3); and (4) all vanes reset $-5°$ with the outside vane removed (vane A4). Vane B was tested only at the design setting angle.

The diffuser was tested over a range of inlet Mach numbers from 0.16 to 0.40 and the turning vanes over a range of Mach numbers from 0.12 to 0.29 which corresponded to test section Mach numbers of about 0.30 to 0.92, respectively. The following principal results were obtained:

1. Over the above range of Mach numbers, the lowest corner 2 total-pressure loss coefficients were obtained with vanes A2, A4, and B. All three configurations yielded loss coefficients based on the total-pressure rake data of 0.165 to 0.175, with the loss increasing slightly with increasing Mach number. At the design corner 2 inlet Mach number of 0.24, the loss coefficient for the three configurations was about 0.170. The lowest loss levels for the vane A configurations were obtained after the vanes were reset $-5°$ (direction of negative incidence). The corresponding loss levels for the A vanes operating at the design setting angle were higher (0.195 to 0.215) with a loss coefficient of about 0.210 at the design Mach number.

2. The reduction in corner total-pressure loss associated with the reset A vanes was attributed primarily to a reduction in endwall losses. At the reset condition the exit flow was turned toward the outside corner. Removing the outer A vane had a negligible effect on the overall corner 2 loss coefficient.

3. Diffuser-loss coefficients increased only slightly with increasing Mach number. The diffuser-loss coefficient was 0.018 at the diffuser inlet design Mach number of 0.33.

4. The presence of the fan shaft fairing accounted for approximately 14 to 31 percent of the total corner 2 loss, depending on the particular vane configuration tested.

Lewis Research Center
National Aeronautics and Space Administration
Cleveland, Ohio, October 27, 1986

Appendix A
Symbols

A area, cm^2

A_{ex} area at corner 1 exit, cm^2

ΔA_{ex} incremental area for rake element at exit, cm^2

A_{in} area at corner 1 inlet, cm^2

ΔA_{in} incremental area for rake elements at inlet, cm^2

A_s cross-sectional area of scoop at corner 1 inlet, cm^2

C vane chord, cm

D diameter, cm

d_n nozzle plate diameter, cm

M Mach number

M_{in} Mach number at corner 1 inlet

M_v Mach number on vane surface based on inlet total pressure and vane surface static pressure

P_n standard-day-corrected nozzle total pressure, N/cm^2

$P_{s,in}$ standard-day-corrected static pressure at corner 1, N/cm^2

$P_{s,v}$ standard-day-corrected vane surface static pressure at V location, N/cm^2

$P_{s,x}$ standard-day-corrected wall static pressure at X location, N/cm^2

$P_{t,e}$ individual rake element standard-day-corrected exit total pressure, N/cm^2

$P_{t,ex}$ area-averaged, standard-day-corrected exit total pressure, N/cm^2

$P_{t,i}$ individual rake element standard-day-corrected inlet total pressure, N/cm^2

$P_{t,in}$ area-averaged, standard-day-corrected inlet total pressure, N/cm^2

q_{in} standard-day-corrected velocity head, N/cm^2

R gas constant

r radius, cm

T_n standard-day-corrected nozzle total temperature, K

T_t standard-day-corrected total temperature, K

W airflow, kg/sec

X axial distance from diffuser inlet, cm

XC/C fraction of vane chord in chordwise direction

Y axial distance from corner 2 inlet, cm

Z axial distance from corner 2 exit, cm

γ ratio of specific heats, 1.40

θ circumferential location from top dead center (clockwise looking downstream), deg

Appendix B
Equations

Airflow—

$$W = 0.04044 \frac{P_n}{T_n} \left(\frac{\pi}{4} d_n^2 \right) \tag{B1}$$

Overall Inlet Total Pressure—

$$P_{t,in} = \frac{\sum_{i=1}^{64} \Delta A_{in} P_{t,i}}{A_{in}} \tag{B2}$$

Overall Exit Total Pressure—

$$P_{t,ex} = \frac{\sum_{i=1}^{64} \Delta A_{ex} P_{t,i}}{A_{ex}} \tag{B3}$$

Loss Coefficient—

$$\frac{P_{t,in} - P_{t,ex}}{q_{in}} \tag{B4}$$

Wall Static Pressure Coefficient—

$$\frac{P_{t,in} - P_{s,x}}{q_{in}} \tag{B5}$$

Vane Surface Static Pressure Coefficient—

$$\frac{P_{s,v} - P_{s,in}}{q_{in}} \tag{B6}$$

Mach Number—

$$\frac{M}{(1 + 0.2\, M^2)^3} = \frac{W}{(A - A_s) P_t} \sqrt{\frac{RT_t}{\gamma}} \tag{B7}$$

Velocity Head—

$$q_{in} = 0.7\, P_{s,in} (M_{in})^2 \tag{B8}$$

Average Inlet Static Pressure—

$$P_{s,in} = P_{t,in} \left(1 + \frac{M_{in}^2}{5} \right)^{-3.5} \tag{B9}$$

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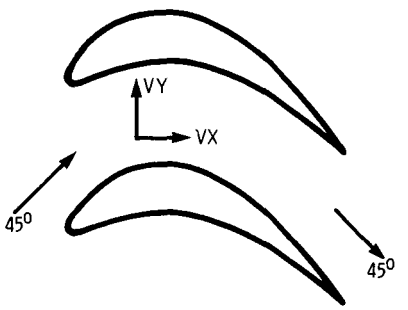
TABLE I.—MANUFACTURING COORDINATES FOR VANE A

[Coordinates are in centimeters.]



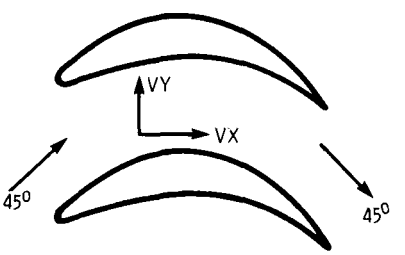
	VX	VY		VX	VY		VX	VY
1	9.2294	−5.2375	45	0.6307	−2.1593	89	3.4733	−0.0321
2	9.2258	−5.2337	46	.4206	−2.2275	90	3.6164	− .0685
3	9.2009	−5.2078	47	.2217	−2.2957	91	3.7587	− .1104
4	9.1556	−5.1602	48	.0355	−2.3634	92	3.9000	− .1581
5	9.0928	−5.0941	49	− .1359	−2.4300	93	4.0406	− .2118
6	9.0150	−5.0123	50	− .2943	−2.4850	94	4.1812	− .2709
7	8.9243	−4.9172	51	− .4361	−2.5304	95	4.3212	− .3351
8	8.8223	−4.8110	52	− .5588	−2.5630	96	4.4607	− .4045
9	8.7101	−4.6955	53	− .6596	−2.5760	97	4.5998	− .4788
10	8.5886	−4.5722	54	− .7408	−2.5628	98	4.7383	− .5582
11	8.4584	−4.4425	55	− .8038	−2.5168	99	4.8764	− .6424
12	8.3199	−4.3077	56	− .8441	−2.4525	100	5.1042	− .7315
13	8.1735	−4.1689	57	− .8658	−2.3549	101	5.1517	− .8255
14	8.0192	−4.0271	58	− .8657	−2.2351	102	5.2890	− .9243
15	7.8573	−3.8833	59	− .8390	−2.0964	103	5.4264	−1.0279
16	7.6878	−3.7384	60	− .7845	−1.9425	104	5.5640	−1.1365
17	7.5107	−3.5934	61	− .7024	−1.7780	105	5.7021	−1.2501
18	7.3261	−3.4491	62	− .5961	−1.6076	106	5.8410	−1.3689
19	7.1340	−3.3062	63	− .4701	−1.4366	107	5.9810	−1.4931
20	6.9344	−3.1657	64	− .3332	−1.2728	108	6.1225	−1.6231
21	6.7275	−3.0281	65	− .1833	−1.1145	109	6.2661	−1.7591
22	6.5134	−2.8944	66	− .0273	−0.9670	110	6.4123	−1.9015
23	6.2921	−2.7652	67	.1322	− .8314	111	6.5618	−2.0509
24	6.0638	−2.6412	68	.2930	− .7077	112	6.7151	−2.2079
25	5.8286	−2.5232	69	.4539	− .5958	113	6.8731	−2.3730
26	5.5868	−2.4120	70	.6139	− .4950	114	7.0366	−2.5470
27	5.3388	−2.3086	71	.7728	− .4047	115	7.2063	−2.7304
28	5.0859	−2.2136	72	.9305	− .3241	116	7.3829	−2.9235
29	4.8278	−2.1259	73	1.0868	− .2524	117	7.5668	−3.1265
30	4.5635	−2.0469	74	1.2419	− .1890	118	7.7579	−3.3388
31	4.2948	−1.9786	75	1.3959	− .1335	119	7.9555	−3.5588
32	4.0225	−1.9213	76	1.5489	− .0852	120	8.1577	−3.7838
33	3.7475	−1.8750	77	7.7011	− .0438	121	8.3611	−4.0095
34	3.4707	−1.8401	78	1.8532	− .0122	122	8.5609	−4.2299
35	3.1930	−1.8168	79	2.0040	.0148	123	8.7508	−4.4378
36	2.9154	−1.8051	80	2.1540	.0365	124	8.9238	−4.6256
37	2.6391	−1.8052	81	2.3033	.0521	125	9.0733	−4.7863
38	2.3652	−1.8170	82	2.4520	.0619	126	9.1941	−4.9152
39	2.0951	−1.8403	83	2.6000	.0658	127	9.2834	−5.0096
40	1.8305	−1.8743	84	2.7474	.0639	128	9.3407	−5.0698
41	1.5726	−1.9181	85	2.8940	.0562	129	9.3676	−5.0978
42	1.3229	−1.9703	86	3.0399	.0428	130	9.3705	−5.1008
43	1.0823	−2.0290	87	3.1851	.0236			
44	0.8514	−2.0926	88	3.3296	.0014			

TABLE II.—CONFIGURATIONS FOR CORNER 2

Vane configuration	Vane setting angle	Vane arrangement	IGV setting angle
A	Design	Design	−10°, 0°, or 10°
A2	Reset −5°	Design	0°
A3	Design	Outer vane removed	0°
A4	Reset −5°	Outer vane removed	0°
B	Design	Design	−10°, 0°, or 10°

TABLE III.—MANUFACTURING COORDINATES FOR VANE B

[Coordinates are in centimeters.]



	VX	VY		VX	VY		VX	VY
1	10.6121	−1.0363	28	2.7682	0.5760	55	3.3198	2.2963
2	10.4292	−0.8972	29	2.4788	.4941	56	3.6493	2.3742
3	10.1729	− .7152	30	2.1894	.4018	57	3.9788	2.4332
4	9.9166	− .5456	31	1.8999	.2985	58	4.3082	2.4741
5	9.6483	− .3805	32	1.6105	.1838	59	4.6377	2.4975
6	9.3800	− .2276	33	1.3211	.0572	60	4.9672	2.5040
7	9.1116	− .0864	34	1.0468	− .0742	61	5.2967	2.4941
8	8.8225	.0531	35	.7724	− .2173	62	5.6228	2.4680
9	8.5334	.1801	36	.5715	− .3299	63	5.9490	2.4248
10	8.2444	.2950	37	.4284	− .3781	64	6.2752	2.3637
11	7.9553	.3984	38	.2778	− .3668	65	6.6013	2.2839
12	7.6662	.4909	39	.1435	− .2979	66	6.9275	2.1847
13	7.3601	.5775	40	.0464	− .1822	67	7.2537	2.0651
14	7.0541	.6527	41	.0019	− .0379	68	7.5798	1.9243
15	6.7480	.7166	42	.0169	.1123	69	7.9060	1.7615
16	6.4419	.7695	43	.0891	.2449	70	8.1904	1.5999
17	6.1359	.8115	44	.2556	.4359	71	8.4748	1.4184
18	5.8298	.8427	45	.5018	.6929	72	8.7591	1.2154
19	5.5238	.8633	46	.7480	.9226	73	9.0435	.9891
20	5.2177	.8735	47	.9942	1.1284	74	9.2710	.7878
21	4.9115	.8735	48	1.2404	1.3137	75	9.4986	.5638
22	4.6053	.8632	49	1.4866	1.4817	76	9.2761	.3125
23	4.2991	.8424	50	1.7802	1.6613	77	9.9537	.0295
24	3.9929	.8110	51	2.0737	1.8201	78	10.1812	− .2898
25	3.6867	.7689	52	2.3673	1.9597	79	10.3398	− .5377
26	3.3806	.7157	53	2.6608	2.0817	80	10.4983	− .8148
27	3.0744	.6515	54	2.9903	2.1991	81	10.6121	−1.0363

TABLE IV.—OVERALL PERFORMANCE BASED ON RAKE MEASUREMENTS FOR VANES A AND B

Vanes and configuration	IGV setting, deg	Airflow, kg/sec	Reading	Mach number				Total pressure, N/cm^2				Total-pressure loss, N/cm^2			Total-pressure loss coefficient			See part __ of tables V–X
				Diffuser		IGV		Diffuser		IGV		Diffuser	Corner 2	IGV	Diffuser	Corner 2	IGV	
				Inlet	Exit	Inlet	Exit	Inlet	Exit	Inlet	Exit							
A	−10	69.09	281–290	0.326	0.240	0.272	0.304	10.226	10.214	10.131	10.147	0.013	0.082	−0.016	0.018	0.208	−0.026	a
	0	82.30	299–302	.396	.288	.328	.356	10.270	10.249	↓	10.151	.021	.118	− .020	.021	.210	− .023	b
		76.18	295–298	.363	.266	.304	.330	10.250	10.234		10.150	.016	.103	− .019	.018	.213	− .026	c
		69.17	279–289	.326	.240	.273	.295	10.226	10.214		10.147	.013	.082	− .016	.018	.208	− .026	d
		35.48	291–294	.162	.121	.132	.142	10.154	10.152		10.134	.002	.020	− .002	.013	.195	− .015	e
	10	68.41	280–288	.323	.238	.273	.292	10.227	10.213		10.144	.014	.081	− .013	.020	.209	− .022	f
A2	0	82.13	307–310	0.395	0.288	0.329	0.352	10.248	10.229	10.131	10.136	0.019	0.098	−0.004	0.019	0.174	−0.005	g
		76.09	303–306	.363	.266	.306	.329	10.233	10.217		10.140	.016	.085	− .009	.019	.177	− .012	h
		69.14	311–314	.327	.240	.274	.294	10.214	10.201		10.139	.013	.069	− .007	.018	.175	− .012	i
		35.45	315–318	.162	.121	.132	.141	10.151	10.148	↓	10.133	.003	.017	− .001	.014	.164	− .006	j
A3	0	76.16	327–330	0.363	0.266	0.301	0.326	10.249	10.232	10.131	10.149	0.017	0.101	−0.017	0.019	0.209	−0.024	k
		69.19	323–326	.326	.240	.270	.293	10.225	10.213	↓	10.144	.012	.082	− .013	.018	.206	− .021	l
		35.51	319–322	.162	.121	.131	.141	10.154	10.152		10.134	.002	.020	− .003	.011	.195	− .015	m
A4	0	76.29	331–334	0.364	0.266	0.303	0.325	10.231	10.213	10.131	10.135	0.018	0.082	−0.004	0.021	0.169	−0.005	n
		69.31	335–338	.327	.241	.273	.293	10.214	10.199	↓	10.136	.015	.068	− .005	.021	.170	− .007	o
		35.48	339–342	.162	.121	.132	.141	10.151	10.148		10.133	.003	.017	− .001	.016	.161	− .007	p
B	−10	68.98	9–19	0.326	0.240	0.274	0.304	10.204	10.194	10.131	10.136	0.010	0.063	−0.005	0.014	0.158	−0.008	q
		35.35	20–31	.161	.121	.130	.145	10.152	10.149	↓	10.136	.002	.018	− .005	.013	.174	− .030	r
	0	76.17	41–44	.364	.266	.302	.327	10.232	10.218		10.144	.014	.086	− .013	.017	.179	− .018	s
		73.99	36–40	.352	.258	.296	.319	10.228	10.214		10.141	.014	.082	− .010	.017	.180	− .014	t
		69.17	8–18	.327	.241	.273	.293	10.203	10.193		10.137	.010	.062	− .005	.014	.155	− .009	u
		56.55	32–35	.263	.195	.211	.226	10.181	10.174		10.138	.007	.042	− .006	.014	.161	− .015	v
		35.15	22–29	.161	.120	.130	.139	10.151	10.149		10.135	.002	.018	− .004	.012	.174	− .024	w
	10	68.28	10–17	.323	.238	.272	.289	10.204	10.194		10.134	.010	.062	− .003	.015	.160	− .005	x
		35.36	21–30	.162	.121	.130	.140	10.152	10.149	↓	10.133	.002	.018	− .002	.013	.174	− .012	y

TABLE V.—TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(a) Vane A in corner 2; IGV setting, −10°; airflow, 69.09 kg/sec; readings 281-290

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.131	10.148	10.192	10.181	10.157	10.184	10.178	10.145	10.165
10.0	10.231	10.228	10.237	10.246	10.232	10.239	10.233	10.242	10.236
15.0	10.237	10.234	10.238	10.244	10.235	10.238	10.234	10.241	10.237
20.0	10.235	10.233	10.240	10.243	10.234	10.238	10.233	10.241	10.237
30.0	10.233	10.234	10.238	10.241	10.233	10.234	10.238	10.241	10.236
50.0	10.235	10.236	10.238	10.240	10.236	10.237	10.239	10.237	10.237
70.0	10.235	10.235	10.237	10.238	10.238	10.236	10.234	10.240	10.237
90.0	10.240	10.237	10.238	10.242	10.239	10.237	10.236	10.241	10.239

INLET BOUNDARY LAYER RAKE

1.0	9.970	9.988	10.033	9.929	9.947	9.964	9.977	9.995	9.975
2.0	10.030	10.051	10.097	9.990	10.005	10.024	10.044	10.058	10.037
3.0	10.080	10.100	10.134	10.044	10.054	10.076	10.103	10.108	10.087
4.0	10.127	10.149	10.163	10.089	10.095	10.119	10.149	10.159	10.131
5.0	10.167	10.187	10.187	10.130	10.129	10.158	10.187	10.197	10.168
7.5	10.223	10.239	10.229	10.211	10.206	10.221	10.229	10.239	10.225
10.0	10.228	10.241	10.237	10.237	10.232	10.232	10.233	10.241	10.235
12.5	10.230	10.242	10.235	10.237	10.236	10.235	10.234	10.239	10.236

EXIT RAKE

5.0	10.067	10.062	10.089	10.081	10.078	10.091	10.117	10.065	10.081
10.0	10.198	10.207	10.219	10.228	10.221	10.226	10.218	10.205	10.216
15.0	10.237	10.236	10.239	10.240	10.238	10.240	10.237	10.238	10.238
20.0	10.237	10.237	10.242	10.239	10.238	10.236	10.239	10.238	10.238
30.0	10.235	10.237	10.242	10.240	10.235	10.236	10.240	10.239	10.238
50.0	10.237	10.238	10.243	10.237	10.237	10.238	10.241	10.237	10.239
70.0	10.235	10.238	10.243	10.237	10.240	10.241	10.245	10.238	10.239
90.0	10.237	10.240	10.243	10.239	10.239	10.240	10.241	10.235	10.239

EXIT BOUNDARY LAYER RAKE

1.0	9.969	9.946	9.987	9.979	9.970	9.979	9.995	9.972	9.975
2.0	9.995	9.988	10.014	10.008	9.996	10.007	10.037	9.996	10.005
3.0	10.018	10.014	10.041	10.035	10.022	10.035	10.062	10.016	10.030
4.0	10.045	10.043	10.069	10.066	10.049	10.065	10.084	10.042	10.058
5.0	10.071	10.072	10.098	10.097	10.077	10.094	10.109	10.070	10.086
7.5	10.147	10.151	10.171	10.179	10.151	10.170	10.164	10.144	10.160
10.0	10.236	10.234	10.238	10.234	10.211	10.226	10.214	10.237	10.229
12.5	10.208	10.213	10.223	10.242	10.228	10.239	10.233	10.211	10.224

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(b) Vane A in corner 2; IGV setting, 0°; airflow, 82.30 kg/sec; readings 299–302

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.145	10.162	10.213	10.178	10.184	10.206	10.208	10.213	10.189
10.0	10.282	10.276	10.281	10.285	10.290	10.284	10.280	10.288	10.283
15.0	10.288	10.280	10.284	10.286	10.290	10.282	10.280	10.286	10.284
20.0	10.286	10.281	10.287	10.287	10.290	10.285	10.279	10.287	10.285
30.0	10.284	10.282	10.285	10.282	10.284	10.282	10.285	10.282	10.283
50.0	10.284	10.283	10.282	10.287	10.283	10.286	10.284	10.288	10.285
70.0	10.285	10.283	10.284	10.284	10.287	10.281	10.279	10.285	10.284
90.0	10.287	10.284	10.289	10.289	10.289	10.284	10.281	10.287	10.286

INLET BOUNDARY LAYER RAKE

1.0	9.908	9.935	9.945	9.848	9.870	9.854	9.966	9.930	9.907
2.0	9.997	10.024	10.041	9.933	9.952	9.939	10.065	10.018	9.996
3.0	10.070	10.096	10.118	10.010	10.023	10.016	10.129	10.089	10.069
4.0	10.141	10.168	10.186	10.074	10.081	10.080	10.170	10.161	10.133
5.0	10.197	10.224	10.235	10.132	10.134	10.136	10.204	10.219	10.185
7.5	10.281	10.288	10.282	10.246	10.241	10.252	10.269	10.283	10.268
10.0	10.285	10.293	10.284	10.283	10.276	10.285	10.284	10.288	10.285
12.5	10.283	10.291	10.285	10.283	10.282	10.288	10.284	10.287	10.285

EXIT RAKE

5.0	10.045	10.039	10.059	10.059	10.050	10.088	10.118	10.041	10.062
10.0	10.232	10.237	10.252	10.267	10.250	10.272	10.259	10.241	10.251
15.0	10.283	10.282	10.286	10.285	10.281	10.288	10.285	10.285	10.284
20.0	10.283	10.282	10.290	10.286	10.282	10.289	10.287	10.284	10.285
30.0	10.281	10.280	10.290	10.286	10.274	10.287	10.285	10.287	10.284
50.0	10.281	10.284	10.290	10.274	10.280	10.288	10.290	10.281	10.283
70.0	10.279	10.283	10.290	10.282	10.285	10.293	10.289	10.281	10.285
90.0	10.284	10.289	10.289	10.285	10.286	10.289	10.287	10.281	10.286

EXIT BOUNDARY LAYER RAKE

1.0	9.903	9.873	9.927	9.916	9.913	9.912	9.962	9.906	9.914
2.0	9.937	9.929	9.966	9.955	9.950	9.952	10.006	9.939	9.954
3.0	9.971	9.967	10.004	9.992	9.989	9.991	10.042	9.972	9.991
4.0	10.008	10.007	10.045	10.033	10.029	10.032	10.076	10.007	10.030
5.0	10.047	10.048	10.086	10.077	10.074	10.076	10.110	10.046	10.071
7.5	10.151	10.156	10.192	10.193	10.187	10.187	10.190	10.155	10.176
10.0	10.276	10.272	10.280	10.274	10.269	10.268	10.258	10.287	10.273
12.5	10.239	10.241	10.263	10.289	10.286	10.283	10.279	10.249	10.266

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(c) Vane A in corner 2; IGV setting, 0°; airflow, 76.18 kg/sec; readings 295–298

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.142	10.161	10.203	10.193	10.167	10.194	10.196	10.139	10.175
10.0	10.260	10.259	10.260	10.268	10.263	10.266	10.259	10.263	10.262
15.0	10.266	10.263	10.264	10.265	10.265	10.266	10.261	10.263	10.264
20.0	10.264	10.260	10.256	10.266	10.264	10.266	10.261	10.264	10.262
30.0	10.262	10.263	10.265	10.262	10.262	10.263	10.265	10.262	10.263
50.0	10.263	10.264	10.264	10.256	10.263	10.267	10.264	10.262	10.263
70.0	10.264	10.266	10.265	10.261	10.267	10.265	10.261	10.259	10.264
90.0	10.269	10.267	10.264	10.264	10.268	10.266	10.263	10.260	10.265

INLET BOUNDARY LAYER RAKE

1.0	9.937	9.948	10.018	9.890	9.903	9.916	9.947	9.952	9.939
2.0	10.016	10.025	10.099	9.965	9.978	9.995	10.035	10.027	10.017
3.0	10.078	10.086	10.144	10.032	10.039	10.062	10.110	10.090	10.080
4.0	10.138	10.145	10.180	10.087	10.088	10.116	10.167	10.153	10.134
5.0	10.194	10.197	10.206	10.136	10.134	10.167	10.212	10.200	10.181
7.5	10.261	10.261	10.257	10.236	10.223	10.242	10.262	10.265	10.251
10.0	10.265	10.265	10.265	10.267	10.255	10.257	10.264	10.270	10.264
12.5	10.263	10.264	10.263	10.266	10.260	10.259	10.265	10.269	10.264

EXIT RAKE

5.0	10.061	10.056	10.075	10.069	10.063	10.088	10.110	10.053	10.072
10.0	10.223	10.232	10.238	10.250	10.239	10.252	10.235	10.225	10.237
15.0	10.266	10.265	10.261	10.266	10.264	10.267	10.261	10.265	10.264
20.0	10.266	10.266	10.266	10.268	10.266	10.267	10.262	10.265	10.266
30.0	10.264	10.265	10.266	10.265	10.261	10.265	10.262	10.267	10.264
50.0	10.266	10.265	10.265	10.258	10.264	10.268	10.266	10.260	10.264
70.0	10.266	10.265	10.266	10.262	10.268	10.268	10.261	10.266	10.265
90.0	10.269	10.269	10.266	10.265	10.267	10.267	10.263	10.263	10.266

EXIT BOUNDARY LAYER RAKE

1.0	9.929	9.901	9.957	9.945	9.933	9.938	9.987	9.934	9.940
2.0	9.958	9.951	9.993	9.979	9.967	9.973	10.024	9.964	9.976
3.0	9.988	9.983	10.027	10.015	9.999	10.007	10.057	9.993	10.009
4.0	10.020	10.018	10.063	10.050	10.036	10.042	10.087	10.024	10.043
5.0	10.053	10.054	10.098	10.087	10.074	10.081	10.115	10.058	10.078
7.5	10.143	10.145	10.189	10.190	10.171	10.174	10.186	10.150	10.168
10.0	10.256	10.251	10.263	10.258	10.235	10.245	10.243	10.266	10.252
12.5	10.219	10.224	10.250	10.270	10.262	10.261	10.260	10.232	10.247

TABLE V.--Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(d) Vane A in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 279–289

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.135	10.143	10.186	10.180	10.151	10.178	10.187	10.145	10.163
10.0	10.235	10.229	10.237	10.245	10.234	10.238	10.237	10.241	10.237
15.0	10.239	10.234	10.239	10.241	10.233	10.238	10.236	10.240	10.237
20.0	10.236	10.234	10.240	10.242	10.231	10.237	10.235	10.241	10.237
30.0	10.227	10.237	10.239	10.241	10.227	10.237	10.239	10.241	10.236
50.0	10.233	10.236	10.240	10.239	10.233	10.238	10.242	10.239	10.237
70.0	10.239	10.236	10.241	10.240	10.237	10.237	10.237	10.239	10.238
90.0	10.239	10.239	10.240	10.241	10.240	10.237	10.238	10.238	10.239

INLET BOUNDARY LAYER RAKE

1.0	9.969	9.984	10.033	9.930	9.948	9.961	9.970	9.991	9.973
2.0	10.032	10.046	10.097	9.991	10.007	10.022	10.040	10.052	10.036
3.0	10.083	10.096	10.136	10.044	10.054	10.073	10.098	10.103	10.086
4.0	10.131	10.145	10.165	10.088	10.093	10.118	10.145	10.153	10.130
5.0	10.171	10.183	10.188	10.129	10.130	10.155	10.184	10.193	10.167
7.5	10.229	10.237	10.230	10.210	10.206	10.217	10.231	10.240	10.225
10.0	10.236	10.241	10.237	10.236	10.233	10.230	10.236	10.244	10.237
12.5	10.233	10.241	10.235	10.236	10.237	10.233	10.237	10.241	10.237

EXIT RAKE

5.0	10.067	10.060	10.089	10.083	10.075	10.090	10.118	10.065	10.081
10.0	10.200	10.201	10.221	10.231	10.221	10.225	10.218	10.209	10.216
15.0	10.238	10.232	10.240	10.243	10.237	10.240	10.237	10.241	10.238
20.0	10.224	10.235	10.242	10.243	10.239	10.240	10.239	10.240	10.238
30.0	10.235	10.239	10.243	10.243	10.234	10.238	10.239	10.241	10.239
50.0	10.237	10.239	10.231	10.234	10.235	10.241	10.241	10.240	10.237
70.0	10.239	10.240	10.242	10.240	10.239	10.242	10.240	10.238	10.240
90.0	10.241	10.242	10.242	10.241	10.239	10.242	10.241	10.239	10.241

EXIT BOUNDARY LAYER RAKE

1.0	9.965	9.948	9.985	9.976	9.974	9.978	10.006	9.970	9.975
2.0	9.993	9.991	10.012	10.005	10.001	10.007	10.037	9.994	10.005
3.0	10.017	10.019	10.040	10.033	10.029	10.035	10.061	10.018	10.031
4.0	10.043	10.046	10.067	10.061	10.058	10.065	10.085	10.042	10.058
5.0	10.069	10.074	10.096	10.095	10.088	10.096	10.110	10.068	10.087
7.5	10.129	10.152	10.170	10.179	10.167	10.173	10.165	10.144	10.160
10.0	10.234	10.236	10.235	10.236	10.229	10.229	10.212	10.238	10.231
12.5	10.205	10.215	10.221	10.243	10.241	10.241	10.233	10.209	10.226

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(e) Vane A in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 291–294

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.130	10.135	10.141	10.137	10.139	10.141	10.137	10.131	10.136
10.0	10.156	10.157	10.156	10.158	10.158	10.156	10.156	10.158	10.157
15.0	10.156	10.157	10.157	10.158	10.157	10.156	10.155	10.159	10.157
20.0	10.157	10.157	10.157	10.159	10.154	10.156	10.156	10.159	10.157
30.0	10.157	10.155	10.158	10.159	10.157	10.155	10.158	10.159	10.157
50.0	10.157	10.158	10.158	10.157	10.158	10.155	10.157	10.158	10.157
70.0	10.156	10.157	10.157	10.158	10.158	10.156	10.157	10.158	10.157
90.0	10.158	10.158	10.157	10.159	10.158	10.156	10.156	10.158	10.158

INLET BOUNDARY LAYER RAKE

1.0	10.093	10.094	10.103	10.079	10.083	10.088	10.089	10.090	10.090
2.0	10.109	10.109	10.117	10.083	10.085	10.104	10.106	10.106	10.102
3.0	10.121	10.122	10.126	10.106	10.110	10.118	10.119	10.118	10.118
4.0	10.131	10.134	10.133	10.117	10.119	10.129	10.131	10.130	10.128
5.0	10.141	10.145	10.140	10.129	10.129	10.138	10.142	10.140	10.138
7.5	10.156	10.159	10.154	10.148	10.148	10.156	10.156	10.157	10.154
10.0	10.158	10.159	10.156	10.158	10.156	10.158	10.157	10.158	10.157
12.5	10.157	10.160	10.156	10.158	10.157	10.158	10.157	10.158	10.158

EXIT RAKE

5.0	10.114	10.115	10.118	10.117	10.115	10.121	10.123	10.112	10.117
10.0	10.147	10.139	10.154	10.155	10.150	10.153	10.151	10.146	10.149
15.0	10.157	10.159	10.160	10.158	10.157	10.160	10.159	10.157	10.158
20.0	10.157	10.160	10.161	10.158	10.157	10.159	10.160	10.157	10.159
30.0	10.157	10.159	10.161	10.158	10.158	10.161	10.160	10.158	10.159
50.0	10.157	10.159	10.161	10.156	10.157	10.159	10.160	10.157	10.158
70.0	10.155	10.159	10.159	10.158	10.159	10.160	10.160	10.158	10.158
90.0	10.157	10.159	10.160	10.157	10.157	10.159	10.160	10.158	10.158

EXIT BOUNDARY LAYER RAKE

1.0	10.089	10.081	10.091	10.091	10.093	10.091	10.098	10.090	10.090
2.0	10.096	10.093	10.098	10.098	10.100	10.098	10.105	10.097	10.098
3.0	10.102	10.099	10.104	10.104	10.107	10.105	10.111	10.102	10.104
4.0	10.109	10.106	10.111	10.111	10.114	10.113	10.115	10.109	10.111
5.0	10.116	10.113	10.118	10.120	10.122	10.118	10.123	10.115	10.118
7.5	10.133	10.131	10.136	10.139	10.141	10.138	10.136	10.133	10.136
10.0	10.158	10.153	10.156	10.155	10.157	10.152	10.149	10.157	10.155
12.5	10.150	10.148	10.151	10.160	10.160	10.157	10.155	10.150	10.154

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(f) Vane A in corner 2; IGV setting, 10°; airflow, 68.41 kg/sec; readings 280–288

INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.135	10.145	10.195	10.182	10.155	10.174	10.183	10.142	10.164
10.0	10.233	10.228	10.240	10.246	10.235	10.232	10.237	10.243	10.237
15.0	10.238	10.230	10.241	10.243	10.236	10.233	10.238	10.242	10.238
20.0	10.236	10.230	10.243	10.244	10.232	10.232	10.236	10.244	10.237
30.0	10.229	10.232	10.243	10.244	10.229	10.232	10.243	10.244	10.237
50.0	10.235	10.231	10.242	10.241	10.237	10.232	10.244	10.237	10.237
70.0	10.234	10.230	10.244	10.242	10.239	10.231	10.239	10.241	10.238
90.0	10.240	10.234	10.242	10.243	10.239	10.233	10.241	10.242	10.239

INLET BOUNDARY LAYER RAKE

1.0	9.975	9.986	10.031	9.923	9.944	9.968	9.981	9.974	9.973
2.0	10.036	10.047	10.094	9.984	10.004	10.030	10.052	10.035	10.035
3.0	10.087	10.096	10.131	10.038	10.052	10.081	10.112	10.087	10.085
4.0	10.134	10.143	10.160	10.083	10.093	10.124	10.158	10.136	10.129
5.0	10.173	10.182	10.182	10.124	10.128	10.162	10.195	10.176	10.165
7.5	10.235	10.235	10.228	10.205	10.205	10.223	10.235	10.227	10.224
10.0	10.244	10.241	10.237	10.231	10.231	10.234	10.236	10.232	10.236
12.5	10.240	10.242	10.235	10.232	10.237	10.237	10.236	10.231	10.236

EXIT RAKE

5.0	10.060	10.059	10.095	10.080	10.070	10.091	10.119	10.069	10.080
10.0	10.191	10.199	10.223	10.229	10.215	10.226	10.219	10.212	10.214
15.0	10.231	10.228	10.241	10.243	10.232	10.239	10.239	10.244	10.237
20.0	10.219	10.232	10.244	10.243	10.234	10.237	10.241	10.242	10.237
30.0	10.230	10.232	10.246	10.244	10.231	10.237	10.241	10.245	10.238
50.0	10.230	10.237	10.234	10.235	10.230	10.238	10.242	10.244	10.236
70.0	10.229	10.237	10.245	10.243	10.232	10.239	10.243	10.240	10.239
90.0	10.235	10.240	10.244	10.244	10.234	10.240	10.243	10.241	10.240

EXIT BOUNDARY LAYER RAKE

1.0	9.967	9.950	9.984	9.978	9.973	9.978	10.005	9.970	9.976
2.0	9.992	9.991	10.011	10.006	9.998	10.007	10.036	9.994	10.005
3.0	10.016	10.018	10.039	10.035	10.024	10.034	10.060	10.014	10.030
4.0	10.042	10.044	10.067	10.066	10.052	10.063	10.084	10.042	10.058
5.0	10.070	10.073	10.096	10.097	10.080	10.095	10.111	10.071	10.087
7.5	10.132	10.148	10.168	10.181	10.158	10.170	10.165	10.145	10.158
10.0	10.235	10.233	10.233	10.235	10.220	10.227	10.211	10.238	10.229
12.5	10.207	10.211	10.220	10.243	10.238	10.243	10.229	10.211	10.225

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(g) Vane A2 in corner 2; IGV setting, 0°; airflow, 82.13 kg/sec; readings 307-310

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.124	10.146	10.193	10.186	10.149	10.191	10.196	10.125	10.164
10.0	10.259	10.257	10.262	10.269	10.264	10.265	10.261	10.263	10.262
15.0	10.265	10.261	10.264	10.267	10.265	10.262	10.262	10.263	10.264
20.0	10.263	10.263	10.268	10.267	10.263	10.265	10.263	10.252	10.263
30.0	10.258	10.260	10.267	10.265	10.258	10.260	10.267	10.265	10.263
50.0	10.261	10.263	10.266	10.253	10.262	10.264	10.267	10.260	10.262
70.0	10.260	10.264	10.267	10.261	10.264	10.262	10.265	10.259	10.263
90.0	10.264	10.266	10.268	10.265	10.266	10.264	10.264	10.262	10.265

INLET BOUNDARY LAYER RAKE

1.0	9.870	9.899	9.923	9.893	9.868	9.887	9.942	9.863	9.893
2.0	9.951	9.984	10.017	9.980	9.958	9.977	10.045	9.943	9.982
3.0	10.015	10.049	10.094	10.062	10.038	10.057	10.110	10.009	10.054
4.0	10.077	10.113	10.165	10.133	10.107	10.124	10.153	10.073	10.118
5.0	10.128	10.164	10.212	10.191	10.165	10.181	10.188	10.130	10.170
7.5	10.233	10.245	10.255	10.264	10.255	10.258	10.248	10.239	10.250
10.0	10.260	10.258	10.259	10.270	10.265	10.264	10.263	10.265	10.263
12.5	10.264	10.261	10.258	10.269	10.265	10.264	10.261	10.264	10.263

EXIT RAKE

5.0	10.025	10.023	10.047	10.051	10.030	10.063	10.101	10.027	10.046
10.0	10.211	10.222	10.240	10.254	10.231	10.246	10.234	10.216	10.232
15.0	10.265	10.260	10.261	10.270	10.260	10.267	10.259	10.264	10.263
20.0	10.263	10.263	10.263	10.269	10.260	10.265	10.262	10.265	10.264
30.0	10.260	10.263	10.263	10.271	10.257	10.264	10.263	10.269	10.264
50.0	10.260	10.265	10.265	10.261	10.258	10.266	10.264	10.264	10.263
70.0	10.261	10.265	10.266	10.264	10.262	10.269	10.261	10.265	10.264
90.0	10.266	10.268	10.266	10.266	10.264	10.267	10.264	10.265	10.266

EXIT BOUNDARY LAYER RAKE

1.0	9.877	9.871	9.915	9.899	9.886	9.897	9.950	9.886	9.898
2.0	9.911	9.922	9.955	9.927	9.923	9.936	9.992	9.918	9.935
3.0	9.945	9.959	9.995	9.979	9.961	9.975	10.029	9.950	9.974
4.0	9.980	9.998	10.037	10.020	10.002	10.015	10.061	9.986	10.012
5.0	10.019	10.037	10.079	10.070	10.044	10.057	10.093	10.022	10.053
7.5	10.125	10.145	10.186	10.185	10.156	10.163	10.170	10.127	10.157
10.0	10.254	10.256	10.264	10.262	10.240	10.248	10.235	10.263	10.253
12.5	10.213	10.228	10.252	10.271	10.259	10.266	10.258	10.221	10.246

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(h) Vane A2 in corner 2; IGV setting, 0°; airflow, 76.09 kg/sec; readings 303–306

INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.121	10.141	10.181	10.163	10.153	10.180	10.189	10.125	10.156
10.0	10.240	10.235	10 244	10.248	10.247	10.249	10.244	10.247	10.244
15.0	10.247	10.243	10.249	10.247	10.246	10.247	10.243	10.247	10.246
20.0	10.242	10.245	10.252	10.246	10.245	10.249	10.244	10.245	10.246
30.0	10.243	10.246	10.248	10.244	10.243	10.246	10.248	10.244	10.245
50.0	10.241	10.248	10.247	10.237	10.245	10.248	10.248	10.242	10.245
70.0	10.241	10.248	10.249	10.245	10.247	10.245	10.245	10.244	10.245
90.0	10.249	10.250	10.250	10.246	10.248	10.249	10.247	10.245	10.248

INLET BOUNDARY LAYER RAKE

1.0	9.905	9.924	9.949	9.920	9.901	9.916	9.966	9.895	9.922
2.0	9.975	9.994	10.034	9.997	9.978	9.994	10.054	9.969	10.000
3.0	10.028	10.052	10.101	10.067	10.046	10.064	10.109	10.027	10.062
4.0	10.079	10.107	10.158	10.128	10.107	10.121	10.145	10.082	10.116
5.0	10.121	10.150	10.201	10.178	10.157	10.172	10.177	10.128	10.160
7.5	10.212	10.223	10.244	10.243	10.240	10.242	10.231	10.225	10.233
10.0	10.240	10.238	10.243	10.247	10.247	10.248	10.245	10.249	10.245
12.5	10.245	10.241	10.244	10.247	10.248	10.247	10.243	10.248	10.245

EXIT RAKE

5.0	10.033	10.039	10.060	10.060	10.051	10.068	10.099	10.035	10.055
10.0	10.196	10.210	10.229	10.239	10.226	10.227	10.219	10.204	10.219
15.0	10.247	10.244	10.247	10.253	10.247	10.246	10.243	10.248	10.247
20.0	10.246	10.246	10.246	10.252	10.248	10.246	10.244	10.249	10.247
30.0	10.244	10.244	10.249	10.252	10.245	10.244	10.243	10.251	10.246
50.0	10.244	10.247	10.248	10.242	10.244	10.248	10.249	10.245	10.246
70.0	10.247	10.248	10.248	10.243	10.247	10.250	10.248	10.247	10.247
90.0	10.251	10.250	10.248	10.248	10.250	10.250	10.247	10.245	10.249

EXIT BOUNDARY LAYER RAKE

1.0	9.913	9.905	9.934	9.927	9.918	9.922	9.973	9.912	9.925
2.0	9.942	9.951	9.968	9.962	9.951	9.956	10.009	9.941	9.960
3.0	9.974	9.985	10.003	9.998	9.985	9.988	10.041	9.970	9.993
4.0	10.005	10.020	10.037	10.033	10.019	10.022	10.069	10.000	10.026
5.0	10.040	10.057	10.075	10.073	10.059	10.061	10.098	10.034	10.062
7.5	10.131	10.152	10.173	10.174	10.156	10.155	10.165	10.128	10.154
10.0	10.241	10.244	10.247	10.243	10.231	10.230	10.222	10.244	10.238
12.5	10.208	10.225	10.237	10.252	10.245	10.249	10.243	10.209	10.233

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(i) Vane A2 in corner 2; IGV setting, 0°; airflow, 69.14 kg/sec; readings 311-314

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.127	10.139	10.169	10.162	10.144	10.171	10.173	10.128	10.152
10.0	10.220	10.220	10.219	10.228	10.227	10.226	10.220	10.226	10.223
15.0	10.225	10.223	10.223	10.230	10.226	10.225	10.220	10.226	10.225
20.0	10.225	10.225	10.225	10.229	10.226	10.226	10.219	10.226	10.225
30.0	10.222	10.222	10.224	10.227	10.222	10.222	10.224	10.227	10.224
50.0	10.223	10.224	10.223	10.217	10.222	10.227	10.223	10.225	10.223
70.0	10.220	10.226	10.224	10.226	10.224	10.224	10.222	10.225	10.224
90.0	10.226	10.227	10.224	10.228	10.227	10.226	10.221	10.226	10.226

INLET BOUNDARY LAYER RAKE

1.0	9.943	9.967	9.987	9.964	9.941	9.958	9.997	9.942	9.962
2.0	9.998	10.027	10.054	10.024	10.002	10.021	10.069	10.000	10.024
3.0	10.040	10.072	10.106	10.081	10.060	10.078	10.116	10.046	10.075
4.0	10.085	10.117	10.155	10.129	10.110	10.126	10.147	10.091	10.120
5.0	10.122	10.153	10.189	10.172	10.151	10.167	10.172	10.130	10.157
7.5	10.194	10.210	10.225	10.227	10.217	10.224	10.215	10.208	10.215
10.0	10.217	10.221	10.227	10.235	10.228	10.235	10.225	10.227	10.227
12.5	10.221	10.223	10.226	10.229	10.223	10.228	10.223	10.226	10.225

EXIT RAKE

5.0	10.055	10.058	10.072	10.070	10.064	10.083	10.104	10.049	10.069
10.0	10.185	10.199	10.212	10.218	10.211	10.213	10.203	10.189	10.204
15.0	10.226	10.225	10.227	10.226	10.225	10.227	10.225	10.224	10.226
20.0	10.225	10.227	10.228	10.226	10.225	10.227	10.226	10.223	10.226
30.0	10.224	10.227	10.228	10.225	10.221	10.225	10.227	10.225	10.225
50.0	10.225	10.227	10.228	10.218	10.224	10.226	10.228	10.221	10.225
70.0	10.224	10.227	10.228	10.221	10.227	10.227	10.229	10.225	10.226
90.0	10.227	10.228	10.228	10.224	10.227	10.228	10.228	10.222	10.227

EXIT BOUNDARY LAYER RAKE

1.0	9.951	9.941	9.976	9.964	9.958	9.963	10.002	9.953	9.963
2.0	9.977	9.978	10.005	9.992	9.984	9.990	10.033	9.975	9.992
3.0	10.001	10.003	10.033	10.022	10.012	10.018	10.060	9.998	10.018
4.0	10.027	10.031	10.062	10.052	10.039	10.044	10.083	10.023	10.045
5.0	10.055	10.060	10.092	10.086	10.072	10.075	10.106	10.050	10.075
7.5	10.130	10.134	10.168	10.167	10.149	10.149	10.158	10.127	10.148
10.0	10.221	10.210	10.226	10.223	10.208	10.209	10.203	10.225	10.216
12.5	10.193	10.191	10.217	10.231	10.222	10.223	10.221	10.195	10.212

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(j) Vane A2 in corner 2; IGV setting, 0°; airflow, 35.45 kg/sec; readings 315–318

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.126	10.132	10.140	10.135	10.130	10.142	10.136	10.128	10.134
10.0	10.151	10.156	10.156	10.155	10.153	10.156	10.153	10.154	10.154
15.0	10.153	10.156	10.155	10.154	10.153	10.156	10.154	10.155	10.154
20.0	10.152	10.158	10.154	10.152	10.154	10.157	10.153	10.154	10.154
30.0	10.152	10.155	10.155	10.154	10.152	10.155	10.155	10.154	10.154
50.0	10.151	10.156	10.155	10.152	10.142	10.156	10.156	10.154	10.153
70.0	10.152	10.156	10.155	10.154	10.153	10.156	10.154	10.153	10.154
90.0	10.152	10.156	10.156	10.155	10.154	10.157	10.154	10.155	10.155

INLET BOUNDARY LAYER RAKE

1.0	10.083	10.091	10.089	10.087	10.085	10.087	10.093	10.083	10.087
2.0	10.097	10.104	10.105	10.102	10.099	10.103	10.111	10.097	10.102
3.0	10.108	10.116	10.117	10.117	10.114	10.117	10.123	10.109	10.115
4.0	10.117	10.128	10.129	10.130	10.126	10.128	10.128	10.120	10.126
5.0	10.126	10.137	10.138	10.140	10.136	10.138	10.135	10.130	10.135
7.5	10.143	10.141	10.151	10.155	10.152	10.154	10.147	10.150	10.149
10.0	10.152	10.155	10.152	10.157	10.154	10.153	10.151	10.155	10.153
12.5	10.153	10.155	10.153	10.157	10.155	10.154	10.152	10.157	10.154

EXIT RAKE

5.0	10.112	10.111	10.114	10.114	10.116	10.117	10.120	10.110	10.114
10.0	10.146	10.146	10.149	10.149	10.151	10.150	10.146	10.146	10.148
15.0	10.157	10.153	10.155	10.155	10.157	10.153	10.154	10.155	10.155
20.0	10.158	10.152	10.157	10.155	10.158	10.154	10.155	10.155	10.155
30.0	10.156	10.152	10.156	10.155	10.156	10.153	10.154	10.156	10.155
50.0	10.157	10.155	10.156	10.155	10.157	10.154	10.156	10.154	10.156
70.0	10.156	10.154	10.143	10.154	10.158	10.155	10.156	10.154	10.154
90.0	10.157	10.155	10.156	10.156	10.157	10.155	10.156	10.155	10.156

EXIT BOUNDARY LAYER RAKE

1.0	10.086	10.081	10.091	10.085	10.089	10.087	10.097	10.086	10.088
2.0	10.092	10.091	10.100	10.092	10.095	10.094	10.103	10.092	10.095
3.0	10.098	10.097	10.105	10.099	10.101	10.099	10.099	10.098	10.099
4.0	10.104	10.103	10.113	10.106	10.110	10.107	10.114	10.104	10.108
5.0	10.111	10.110	10.120	10.115	10.118	10.116	10.120	10.109	10.115
7.5	10.128	10.129	10.138	10.133	10.135	10.132	10.134	10.128	10.132
10.0	10.153	10.152	10.157	10.149	10.152	10.149	10.147	10.154	10.152
12.5	10.145	10.145	10.153	10.154	10.155	10.155	10.154	10.146	10.151

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(k) Vane A3 in corner 2; IGV setting, 0°; airflow, 76.16 kg/sec; readings 327-330

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.145	10.141	10.183	10.192	10.169	10.201	10.205	10.161	10.174
10.0	10.255	10.253	10.259	10.268	10.263	10.265	10.260	10.263	10.261
15.0	10.261	10.258	10.260	10.264	10.262	10.263	10.261	10.263	10.262
20.0	10.261	10.261	10.264	10.265	10.262	10.265	10.260	10.263	10.263
30.0	10.259	10.254	10.262	10.264	10.259	10.254	10.262	10.264	10.260
50.0	10.260	10.262	10.263	10.261	10.258	10.264	10.263	10.261	10.261
70.0	10.261	10.263	10.264	10.261	10.261	10.261	10.261	10.262	10.262
90.0	10.264	10.265	10.264	10.264	10.265	10.264	10.263	10.262	10.264

INLET BOUNDARY LAYER RAKE

1.0	9.943	9.946	9.957	9.944	9.921	9.936	9.996	9.928	9.946
2.0	10.008	10.010	10.034	10.019	9.998	10.012	10.082	9.998	10.020
3.0	10.056	10.062	10.093	10.086	10.066	10.082	10.137	10.057	10.080
4.0	10.104	10.111	10.147	10.143	10.124	10.141	10.172	10.113	10.132
5.0	10.143	10.152	10.191	10.193	10.174	10.190	10.201	10.160	10.175
7.5	10.227	10.228	10.251	10.257	10.254	10.260	10.253	10.249	10.247
10.0	10.255	10.253	10.258	10.264	10.261	10.264	10.263	10.265	10.260
12.5	10.261	10.259	10.260	10.264	10.260	10.264	10.261	10.264	10.261

EXIT RAKE

5.0	10.053	10.040	10.069	10.081	10.068	10.083	10.112	10.066	10.071
10.0	10.211	10.203	10.231	10.255	10.240	10.248	10.239	10.232	10.232
15.0	10.262	10.259	10.261	10.265	10.261	10.264	10.261	10.264	10.262
20.0	10.263	10.261	10.260	10.264	10.260	10.264	10.263	10.263	10.262
30.0	10.262	10.260	10.265	10.266	10.258	10.263	10.263	10.264	10.263
50.0	10.262	10.262	10.252	10.262	10.260	10.265	10.265	10.261	10.261
70.0	10.261	10.262	10.265	10.262	10.263	10.265	10.265	10.264	10.263
90.0	10.264	10.267	10.266	10.263	10.264	10.265	10.264	10.264	10.265

EXIT BOUNDARY LAYER RAKE

1.0	9.944	9.948	9.989	9.947	9.934	9.903	9.951	9.955	9.946
2.0	9.977	9.982	10.024	9.978	9.964	9.956	9.984	9.989	9.982
3.0	10.009	10.016	10.054	10.007	9.993	9.987	10.017	10.023	10.013
4.0	10.044	10.052	10.083	10.037	10.022	10.018	10.049	10.060	10.046
5.0	10.079	10.090	10.112	10.073	10.057	10.050	10.085	10.099	10.081
7.5	10.176	10.186	10.173	10.157	10.139	10.132	10.170	10.201	10.167
10.0	10.258	10.262	10.258	10.232	10.212	10.207	10.236	10.267	10.242
12.5	10.245	10.252	10.241	10.262	10.254	10.248	10.258	10.261	10.253

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(l) Vane A3 in corner 2; IGV setting, 0°; airflow, 69.19 kg/sec; readings 323-326

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.147	10.130	10.166	10.181	10.154	10.170	10.188	10.159	10.162
10.0	10.237	10.225	10.230	10.246	10.235	10.233	10.232	10.244	10.235
15.0	10.240	10.230	10.232	10.245	10.236	10.232	10.233	10.243	10.237
20.0	10.240	10.231	10.236	10.246	10.236	10.234	10.232	10.244	10.237
30.0	10.234	10.229	10.235	10.243	10.234	10.229	10.235	10.243	10.235
50.0	10.239	10.233	10.235	10.242	10.235	10.234	10.235	10.239	10.236
70.0	10.239	10.231	10.235	10.241	10.239	10.232	10.233	10.240	10.236
90.0	10.242	10.235	10.235	10.242	10.242	10.233	10.234	10.242	10.238

INLET BOUNDARY LAYER RAKE

1.0	9.973	9.984	9.996	9.971	9.953	9.972	10.022	9.960	9.979
2.0	10.026	10.037	10.060	10.031	10.013	10.035	10.092	10.017	10.039
3.0	10.066	10.079	10.108	10.087	10.070	10.091	10.136	10.064	10.088
4.0	10.104	10.120	10.151	10.133	10.117	10.137	10.165	10.110	10.130
5.0	10.135	10.151	10.186	10.173	10.158	10.178	10.188	10.148	10.165
7.5	10.205	10.214	10.234	10.231	10.223	10.238	10.232	10.221	10.225
10.0	10.230	10.231	10.239	10.236	10.231	10.244	10.240	10.234	10.236
12.5	10.233	10.235	10.240	10.235	10.232	10.244	10.239	10.233	10.236

EXIT RAKE

5.0	10.066	10.058	10.084	10.085	10.071	10.099	10.123	10.072	10.082
10.0	10.191	10.194	10.217	10.227	10.212	10.230	10.224	10.208	10.213
15.0	10.232	10.239	10.242	10.237	10.231	10.242	10.241	10.236	10.237
20.0	10.232	10.241	10.244	10.237	10.234	10.230	10.243	10.235	10.237
30.0	10.231	10.241	10.244	10.237	10.231	10.240	10.243	10.236	10.238
50.0	10.233	10.243	10.243	10.234	10.229	10.243	10.245	10.233	10.238
70.0	10.232	10.242	10.244	10.234	10.233	10.242	10.244	10.234	10.238
90.0	10.235	10.244	10.244	10.235	10.235	10.243	10.243	10.235	10.239

EXIT BOUNDARY LAYER RAKE

1.0	9.981	9.977	10.014	9.979	9.974	9.938	9.978	9.987	9.979
2.0	10.008	10.002	10.043	10.004	10.000	9.981	10.006	10.014	10.007
3.0	10.034	10.029	10.068	10.029	10.023	10.008	10.032	10.042	10.033
4.0	10.064	10.058	10.091	10.054	10.048	10.033	10.058	10.071	10.060
5.0	10.092	10.088	10.113	10.084	10.065	10.061	10.086	10.102	10.086
7.5	10.173	10.168	10.170	10.152	10.143	10.131	10.155	10.182	10.159
10.0	10.238	10.235	10.229	10.215	10.202	10.193	10.211	10.238	10.220
12.5	10.227	10.225	10.216	10.241	10.237	10.224	10.228	10.231	10.229

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(m) Vane A3 in corner 2; IGV setting, 0°; airflow, 35.51 kg/sec; readings 319-322

INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.130	10.131	10.136	10.138	10.132	10.140	10.139	10.136	10.135
10.0	10.154	10.156	10.156	10.159	10.153	10.159	10.156	10.159	10.157
15.0	10.154	10.157	10.156	10.159	10.154	10.159	10.156	10.158	10.157
20.0	10.155	10.159	10.156	10.159	10.154	10.159	10.156	10.159	10.157
30.0	10.153	10.157	10.156	10.158	10.153	10.157	10.156	10.158	10.156
50.0	10.155	10.160	10.156	10.159	10.156	10.159	10.157	10.158	10.157
70.0	10.155	10.159	10.157	10.159	10.156	10.158	10.157	10.158	10.157
90.0	10.155	10.160	10.158	10.159	10.156	10.160	10.157	10.158	10.158

INLET BOUNDARY LAYER RAKE

1.0	10.088	10.093	10.089	10.089	10.088	10.090	10.097	10.089	10.090
2.0	10.102	10.106	10.103	10.104	10.101	10.106	10.114	10.103	10.105
3.0	10.112	10.116	10.115	10.119	10.116	10.119	10.124	10.115	10.117
4.0	10.121	10.125	10.126	10.129	10.125	10.130	10.130	10.126	10.127
5.0	10.130	10.135	10.135	10.140	10.135	10.141	10.137	10.135	10.136
7.5	10.148	10.152	10.151	10.157	10.153	10.157	10.150	10.154	10.153
10.0	10.155	10.158	10.155	10.159	10.156	10.158	10.154	10.159	10.157
12.5	10.156	10.159	10.155	10.160	10.155	10.159	10.154	10.159	10.157

EXIT RAKE

5.0	10.116	10.111	10.118	10.118	10.118	10.118	10.124	10.116	10.117
10.0	10.149	10.143	10.153	10.153	10.154	10.150	10.151	10.150	10.150
15.0	10.160	10.155	10.159	10.158	10.159	10.156	10.159	10.157	10.158
20.0	10.160	10.156	10.161	10.158	10.159	10.156	10.160	10.158	10.158
30.0	10.159	10.156	10.161	10.159	10.159	10.155	10.160	10.158	10.158
50.0	10.160	10.156	10.160	10.158	10.160	10.156	10.160	10.157	10.158
70.0	10.160	10.157	10.160	10.158	10.162	10.156	10.161	10.157	10.159
90.0	10.161	10.156	10.160	10.158	10.160	10.157	10.159	10.158	10.159

EXIT BOUNDARY LAYER RAKE

1.0	10.094	10.091	10.102	10.088	10.091	10.082	10.095	10.089	10.091
2.0	10.101	10.098	10.109	10.096	10.098	10.093	10.101	10.095	10.099
3.0	10.107	10.104	10.113	10.100	10.105	10.099	10.108	10.100	10.105
4.0	10.113	10.111	10.118	10.106	10.109	10.105	10.114	10.107	10.110
5.0	10.121	10.119	10.124	10.114	10.118	10.159	10.122	10.114	10.124
7.5	10.140	10.138	10.139	10.130	10.133	10.129	10.139	10.134	10.135
10.0	10.158	10.157	10.158	10.148	10.149	10.144	10.154	10.156	10.153
12.5	10.154	10.153	10.153	10.155	10.158	10.154	10.159	10.150	10.155

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(n) Vane A4 in corner 2; IGV setting, 0°; airflow, 76.29 kg/sec; readings 331–334

INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.130	10.120	10.161	10.168	10.137	10.183	10.189	10.139	10.154
10.0	10.238	10.232	10.239	10.247	10.236	10.247	10.242	10.244	10.241
15.0	10.244	10.242	10.241	10.245	10.238	10.244	10.241	10.245	10.243
20.0	10.243	10.242	10.245	10.245	10.239	10.247	10.241	10.245	10.243
30.0	10.238	10.236	10.243	10.244	10.238	10.236	10.243	10.244	10.240
50.0	10.282	10.245	10.243	10.229	10.243	10.246	10.245	10.281	10.252
70.0	10.242	10.245	10.245	10.242	10.243	10.245	10.242	10.243	10.243
90.0	10.245	10.248	10.245	10.245	10.245	10.247	10.244	10.242	10.245

INLET BOUNDARY LAYER RAKE

1.0	9.929	9.927	9.947	9.928	9.902	9.918	9.976	9.920	9.931
2.0	9.993	9.994	10.024	10.004	9.978	9.996	10.062	9.988	10.005
3.0	10.040	10.046	10.080	10.074	10.047	10.065	10.113	10.043	10.063
4.0	10.087	10.092	10.133	10.130	10.106	10.121	10.146	10.097	10.114
5.0	10.127	10.132	10.176	10.179	10.155	10.170	10.175	10.145	10.157
7.5	10.209	10.208	10.235	10.246	10.236	10.240	10.229	10.232	10.229
10.0	10.238	10.232	10.241	10.251	10.243	10.244	10.240	10.247	10.242
12.5	10.242	10.236	10.240	10.250	10.242	10.244	10.239	10.245	10.242

EXIT RAKE

5.0	10.036	10.023	10.059	10.060	10.050	10.060	10.088	10.039	10.052
10.0	10.192	10.187	10.217	10.235	10.225	10.229	10.215	10.209	10.213
15.0	10.246	10.239	10.241	10.247	10.243	10.246	10.241	10.245	10.244
20.0	10.245	10.242	10.244	10.247	10.243	10.244	10.243	10.245	10.244
30.0	10.243	10.240	10.245	10.247	10.237	10.244	10.243	10.246	10.243
50.0	10.244	10.240	10.245	10.242	10.239	10.245	10.245	10.244	10.243
70.0	10.247	10.242	10.245	10.242	10.243	10.246	10.246	10.242	10.244
90.0	10.248	10.247	10.245	10.245	10.247	10.245	10.245	10.243	10.246

EXIT BOUNDARY LAYER RAKE

1.0	9.924	9.928	9.978	9.924	9.909	9.891	9.935	9.934	9.928
2.0	9.958	9.961	10.013	9.954	9.939	9.937	9.969	9.968	9.962
3.0	9.990	9.992	10.044	9.982	9.968	9.969	10.002	10.002	9.994
4.0	10.024	10.027	10.072	10.013	9.997	10.001	10.036	10.040	10.026
5.0	10.060	10.063	10.100	10.049	10.032	10.034	10.070	10.078	10.061
7.5	10.158	10.160	10.170	10.133	10.113	10.118	10.159	10.180	10.149
10.0	10.240	10.245	10.241	10.211	10.188	10.194	10.224	10.244	10.223
12.5	10.227	10.231	10.225	10.243	10.231	10.231	10.243	10.239	10.234

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(o) Vane A4 in corner 2; IGV setting, 0°; airflow, 69.31 kg/sec; readings 335–338

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.129	10.112	10.157	10.159	10.140	10.160	10.173	10.140	10.146
10.0	10.218	10.210	10.217	10.230	10.220	10.219	10.221	10.227	10.220
15.0	10.223	10.217	10.221	10.228	10.221	10.220	10.220	10.227	10.222
20.0	10.223	10.219	10.226	10.229	10.220	10.221	10.220	10.215	10.222
30.0	10.218	10.216	10.223	10.227	10.218	10.216	10.223	10.227	10.221
50.0	10.243	10.224	10.223	10.225	10.221	10.254	10.256	10.257	10.238
70.0	10.221	10.222	10.223	10.226	10.223	10.219	10.220	10.227	10.223
90.0	10.224	10.223	10.224	10.227	10.225	10.222	10.223	10.226	10.224

INLET BOUNDARY LAYER RAKE

1.0	9.959	9.966	9.975	9.957	9.941	9.958	10.001	9.945	9.963
2.0	10.012	10.021	10.039	10.019	10.003	10.020	10.069	10.003	10.023
3.0	10.053	10.064	10.088	10.074	10.060	10.077	10.110	10.050	10.072
4.0	10.092	10.104	10.131	10.121	10.109	10.124	10.135	10.097	10.114
5.0	10.124	10.138	10.166	10.160	10.150	10.162	10.160	10.137	10.150
7.5	10.194	10.203	10.216	10.216	10.212	10.222	10.208	10.208	10.210
10.0	10.217	10.221	10.222	10.225	10.220	10.227	10.221	10.223	10.222
12.5	10.221	10.224	10.223	10.224	10.222	10.228	10.221	10.222	10.223

EXIT RAKE

5.0	10.052	10.046	10.072	10.076	10.059	10.075	10.100	10.057	10.067
10.0	10.182	10.180	10.202	10.218	10.201	10.212	10.204	10.192	10.199
15.0	10.221	10.220	10.227	10.227	10.220	10.226	10.225	10.223	10.224
20.0	10.221	10.223	10.227	10.226	10.221	10.225	10.227	10.224	10.224
30.0	10.221	10.220	10.229	10.225	10.220	10.223	10.227	10.225	10.224
50.0	10.221	10.222	10.228	10.222	10.221	10.225	10.229	10.223	10.224
70.0	10.222	10.223	10.227	10.222	10.223	10.226	10.228	10.223	10.224
90.0	10.224	10.226	10.226	10.224	10.222	10.225	10.228	10.223	10.225

EXIT BOUNDARY LAYER RAKE

1.0	9.964	9.961	10.001	9.957	9.957	9.930	9.971	9.971	9.964
2.0	9.989	9.987	10.029	9.982	9.981	9.972	9.999	10.000	9.992
3.0	10.014	10.015	10.055	10.006	10.005	9.998	10.025	10.028	10.018
4.0	10.042	10.042	10.065	10.030	10.031	10.024	10.053	10.059	10.043
5.0	10.069	10.070	10.099	10.060	10.059	10.051	10.084	10.091	10.073
7.5	10.145	10.149	10.158	10.129	10.124	10.120	10.151	10.171	10.143
10.0	10.217	10.222	10.219	10.194	10.185	10.181	10.204	10.226	10.206
12.5	10.201	10.208	10.204	10.223	10.220	10.212	10.219	10.220	10.213

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(p) Vane A4 in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 339-342

INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.129	10.122	10.127	10.137	10.129	10.137	10.137	10.132	10.131
10.0	10.154	10.149	10.153	10.155	10.152	10.153	10.151	10.155	10.153
15.0	10.156	10.148	10.153	10.154	10.153	10.154	10.153	10.155	10.153
20.0	10.154	10.152	10.154	10.157	10.151	10.153	10.154	10.155	10.154
30.0	10.154	10.152	10.154	10.157	10.154	10.152	10.154	10.157	10.154
50.0	10.160	10.155	10.153	10.154	10.155	10.160	10.161	10.162	10.157
70.0	10.155	10.153	10.153	10.154	10.155	10.151	10.154	10.156	10.154
90.0	10.156	10.154	10.154	10.155	10.155	10.153	10.153	10.154	10.154

INLET BOUNDARY LAYER RAKE

1.0	10.088	10.088	10.094	10.086	10.083	10.088	10.098	10.085	10.089
2.0	10.099	10.101	10.109	10.100	10.098	10.103	10.117	10.099	10.103
3.0	10.109	10.111	10.121	10.114	10.113	10.117	10.126	10.109	10.115
4.0	10.119	10.121	10.130	10.126	10.124	10.129	10.133	10.121	10.125
5.0	10.127	10.131	10.140	10.135	10.134	10.139	10.139	10.130	10.134
7.5	10.145	10.147	10.152	10.152	10.151	10.155	10.152	10.148	10.150
10.0	10.151	10.153	10.156	10.155	10.154	10.157	10.156	10.153	10.154
12.5	10.154	10.153	10.156	10.155	10.155	10.156	10.156	10.154	10.155

EXIT RAKE

5.0	10.111	10.109	10.117	10.115	10.113	10.117	10.119	10.111	10.114
10.0	10.141	10.139	10.153	10.150	10.146	10.149	10.146	10.146	10.146
15.0	10.142	10.157	10.156	10.155	10.153	10.156	10.155	10.155	10.154
20.0	10.154	10.155	10.155	10.155	10.152	10.157	10.155	10.155	10.155
30.0	10.153	10.154	10.156	10.156	10.154	10.156	10.155	10.156	10.155
50.0	10.152	10.155	10.155	10.154	10.154	10.158	10.156	10.154	10.155
70.0	10.154	10.157	10.155	10.153	10.154	10.158	10.157	10.155	10.155
90.0	10.153	10.157	10.156	10.154	10.153	10.156	10.156	10.154	10.155

EXIT BOUNDARY LAYER RAKE

1.0	10.090	10.090	10.095	10.088	10.086	10.080	10.085	10.093	10.088
2.0	10.098	10.094	10.101	10.096	10.092	10.089	10.093	10.100	10.095
3.0	10.102	10.100	10.095	10.101	10.098	10.096	10.098	10.106	10.100
4.0	10.109	10.107	10.112	10.107	10.104	10.102	10.106	10.112	10.108
5.0	10.117	10.114	10.117	10.114	10.111	10.108	10.113	10.122	10.114
7.5	10.138	10.132	10.132	10.131	10.126	10.125	10.130	10.141	10.132
10.0	10.158	10.153	10 152	10.148	10.142	10.139	10.145	10.157	10.149
12.5	10.151	10.150	10.146	10.155	10.152	10.149	10.152	10.155	10.151

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(q) Vane B in corner 2; IGV setting, −10°; airflow, 68.98 kg/sec; readings 9–19

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.146	10.136	10.156	10.138	10.101	10.163	10.134	10.180	10.144
10.0	10.214	10.212	10.222	10.216	10.208	10.219	10.220	10.219	10.216
15.0	10.216	10.214	10.220	10.216	10.211	10.220	10.219	10.217	10.216
20.0	10.210	10.214	10.217	10.215	10.211	10.217	10.216	10.212	10.214
30.0	10.205	10.214	10.214	10.214	10.207	10.222	10.215	10.209	10.213
50.0	10.204	10.218	10.218	10.213	10.212	10.222	10.217	10.213	10.215
70.0	10.209	10.220	10.215	10.211	10.212	10.220	10.215	10.211	10.214
90.0	10.211	10.219	10.213	10.213	10.211	10.219	10.216	10.213	10.214

INLET BOUNDARY LAYER RAKE

1.0	9.993	9.986	9.971	9.976	9.941	9.956	9.934	10.026	9.973
2.0	10.046	10.039	10.027	10.029	9.992	10.009	9.989	10.079	10.026
3.0	10.090	10.084	10.075	10.078	10.037	10.058	10.038	10.118	10.072
4.0	10.127	10.124	10.119	10.118	10.075	10.099	10.079	10.151	10.111
5.0	10.164	10.164	10.161	10.155	10.112	10.134	10.120	10.188	10.150
7.5	10.211	10.216	10.215	10.218	10.190	10.200	10.186	10.226	10.208
10.0	10.216	10.208	10.219	10.225	10.215	10.214	10.217	10.226	10.218
12.5	10.217	10.220	10.220	10.225	10.216	10.215	10.216	10.224	10.219

EXIT RAKE

5.0	10.103	10.062	10.079	10.071	10.050	10.064	10.064	10.099	10.074
10.0	10.214	10.199	10.206	10.197	10.178	10.192	10.196	10.214	10.200
15.0	10.225	10.216	10.222	10.218	10.221	10.214	10.219	10.218	10.219
20.0	10.221	10.216	10.219	10.217	10.221	10.214	10.217	10.215	10.217
30.0	10.216	10.213	10.216	10.215	10.220	10.213	10.214	10.210	10.215
50.0	10.214	10.211	10.216	10.215	10.223	10.214	10.217	10.215	10.216
70.0	10.219	10.212	10.214	10.214	10.223	10.214	10.217	10.213	10.216
90.0	10.220	10.210	10.212	10.218	10.221	10.212	10.216	10.216	10.216

EXIT BOUNDARY LAYER RAKE

1.0	9.985	9.961	9.994	9.969	9.962	9.972	9.980	9.984	9.976
2.0	10.011	9.992	10.019	9.994	9.984	9.998	10.001	10.008	10.001
3.0	10.036	10.016	10.046	10.020	10.007	10.019	10.022	10.033	10.025
4.0	10.063	10.041	10.073	10.044	10.028	10.042	10.046	10.059	10.050
5.0	10.090	10.069	10.101	10.072	10.053	10.088	10.079	10.087	10.080
7.5	10.159	10.141	10.175	10.145	10.108	10.137	10.144	10.161	10.146
10.0	10.205	10.192	10.219	10.200	10.178	10.196	10.204	10.208	10.200
12.5	10.214	10.209	10.226	10.213	10.211	10.217	10.224	10.216	10.216

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(r) Vane B in corner 2; IGV setting, −10°; airflow, 35.35 kg/sec; readings 20–31

INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.132	10.128	10.141	10.133	10.121	10.133	10.138	10.146	10.134
10.0	10.150	10.150	10.162	10.157	10.150	10.152	10.160	10.159	10.155
15.0	10.150	10.152	10.161	10.158	10.150	10.154	10.161	10.158	10.155
20.0	10.147	10.153	10.159	10.157	10.149	10.153	10.159	10.157	10.154
30.0	10.147	10.152	10.158	10.158	10.148	10.151	10.160	10.156	10.154
50.0	10.147	10.154	10.160	10.158	10.150	10.151	10.161	10.159	10.155
70.0	10.147	10.152	10.161	10.158	10.150	10.152	10.159	10.158	10.155
90.0	10.149	10.153	10.158	10.159	10.149	10.153	10.159	10.158	10.155

INLET BOUNDARY LAYER RAKE

1.0	10.094	10.095	10.081	10.083	10.090	10.088	10.071	10.093	10.087
2.0	10.108	10.109	10.097	10.098	10.104	10.103	10.086	10.107	10.102
3.0	10.121	10.122	10.110	10.113	10.117	10.116	10.099	10.120	10.115
4.0	10.131	10.132	10.121	10.124	10.128	10.126	10.110	10.131	10.125
5.0	10.143	10.143	10.132	10.135	10.137	10.136	10.121	10.141	10.136
7.5	10.157	10.158	10.150	10.153	10.156	10.155	10.143	10.155	10.153
10.0	10.162	10.160	10.151	10.155	10.161	10.160	10.149	10.153	10.156
12.5	10.162	10.160	10.150	10.156	10.160	10.160	10.149	10.154	10.156

EXIT RAKE

5.0	10.117	10.110	10.122	10.118	10.107	10.107	10.117	10.123	10.115
10.0	10.150	10.147	10.157	10.153	10.139	10.141	10.154	10.157	10.150
15.0	10.154	10.151	10.161	10.161	10.154	10.150	10.161	10.161	10.157
20.0	10.154	10.151	10.160	10.161	10.153	10.150	10.160	10.161	10.156
30.0	10.152	10.148	10.159	10.161	10.154	10.150	10.160	10.158	10.155
50.0	10.150	10.149	10.160	10.160	10.155	10.151	10.161	10.159	10.156
70.0	10.155	10.150	10.160	10.161	10.153	10.150	10.160	10.158	10.156
90.0	10.153	10.149	10.160	10.161	10.153	10.150	10.160	10.160	10.156

EXIT BOUNDARY LAYER RAKE

1.0	10.096	10.090	10.089	10.083	10.091	10.093	10.086	10.085	10.089
2.0	10.103	10.100	10.096	10.090	10.098	10.099	10.091	10.092	10.096
3.0	10.109	10.107	10.102	10.096	10.103	10.105	10.098	10.097	10.102
4.0	10.115	10.114	10.111	10.103	10.109	10.110	10.104	10.104	10.109
5.0	10.123	10.122	10.117	10.111	10.119	10.131	10.112	10.112	10.118
7.5	10.142	10.141	10.137	10.129	10.133	10.136	10.129	10.130	10.135
10.0	10.155	10.156	10.151	10.144	10.151	10.152	10.146	10.144	10.150
12.5	10.161	10.161	10.154	10.149	10.159	10.159	10.154	10.148	10.156

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(s) Vane B in corner 2; IGV setting, 0°; airflow, 76.17 kg/sec; readings 41–44

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.168	10.146	10.169	10.147	10.111	10.167	10.136	10.201	10.156
10.0	10.242	10.241	10.255	10.250	10.245	10.249	10.251	10.249	10.248
15.0	10.247	10.245	10.257	10.251	10.244	10.251	10.249	10.247	10.249
20.0	10.239	10.244	10.249	10.249	10.243	10.247	10.245	10.243	10.245
30.0	10.237	10.239	10.246	10.248	10.236	10.247	10.244	10.237	10.242
50.0	10.234	10.243	10.247	10.245	10.246	10.251	10.248	10.245	10.245
70.0	10.241	10.249	10.246	10.244	10.246	10.249	10.244	10.241	10.245
90.0	10.245	10.246	10.245	10.247	10.245	10.247	10.247	10.245	10.246

INLET BOUNDARY LAYER RAKE

1.0	9.947	9.919	9.936	9.917	9.881	9.906	9.883	9.976	9.921
2.0	10.024	9.991	10.008	9.992	9.953	9.984	9.957	10.053	9.995
3.0	10.085	10.050	10.068	10.060	10.011	10.050	10.020	10.111	10.057
4.0	10.139	10.108	10.125	10.115	10.063	10.106	10.076	10.165	10.112
5.0	10.198	10.171	10.190	10.164	10.113	10.155	10.127	10.219	10.167
7.5	10.246	10.230	10.246	10.247	10.216	10.238	10.229	10.253	10.238
10.0	10.250	10.238	10.255	10.253	10.249	10.249	10.248	10.251	10.249
12.5	10.248	10.238	10.254	10.252	10.248	10.250	10.248	10.248	10.248

EXIT RAKE

5.0	10.094	10.048	10.072	10.046	10.015	10.057	10.047	10.093	10.059
10.0	10.241	10.222	10.244	10.230	10.196	10.224	10.221	10.240	10.227
15.0	10.252	10.248	10.256	10.254	10.249	10.249	10.250	10.248	10.251
20.0	10.247	10.248	10.253	10.253	10.249	10.246	10.247	10.243	10.248
30.0	10.241	10.244	10.249	10.249	10.245	10.246	10.247	10.239	10.245
50.0	10.237	10.239	10.248	10.246	10.250	10.251	10.250	10.244	10.246
70.0	10.246	10.248	10.246	10.245	10.252	10.245	10.249	10.243	10.247
90.0	10.249	10.243	10.249	10.247	10.249	10.234	10.246	10.246	10.246

EXIT BOUNDARY LAYER RAKE

1.0	9.940	9.906	9.930	9.927	9.905	9.918	9.917	9.948	9.924
2.0	9.975	9.950	9.975	9.960	9.936	9.950	9.946	9.981	9.959
3.0	10.010	9.984	10.010	9.994	9.963	9.982	9.975	10.016	9.992
4.0	10.045	10.020	10.048	10.027	9.994	10.014	10.005	10.052	10.026
5.0	10.082	10.058	10.086	10.066	10.030	10.104	10.048	10.090	10.070
7.5	10.173	10.159	10.188	10.156	10.120	10.145	10.140	10.185	10.158
10.0	10.235	10.227	10.249	10.230	10.204	10.225	10.225	10.241	10.230
12.5	10.249	10.239	10.260	10.248	10.244	10.249	10.252	10.248	10.248

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(t) Vane B in corner 2; IGV setting, 0°; airflow, 73.99 kg/sec; readings 36–40

INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.173	10.147	10.170	10.142	10.100	10.168	10.134	10.191	10.153
10.0	10.242	10.240	10.253	10.243	10.232	10.245	10.246	10.241	10.243
15.0	10.243	10.242	10.252	10.243	10.235	10.246	10.246	10.239	10.243
20.0	10.237	10.243	10.246	10.241	10.233	10.243	10.243	10.235	10.240
30.0	10.233	10.237	10.244	10.241	10.229	10.245	10.242	10.232	10.238
50.0	10.231	10.241	10.244	10.232	10.241	10.247	10.245	10.238	10.240
70.0	10.237	10.245	10.243	10.234	10.241	10.245	10.241	10.233	10.240
90.0	10.240	10.243	10.240	10.239	10.240	10.244	10.242	10.236	10.241

INLET BOUNDARY LAYER RAKE

1.0	9.946	9.929	9.933	9.919	9.893	9.910	9.892	9.980	9.925
2.0	10.018	9.999	10.006	9.991	9.962	9.982	9.961	10.053	9.997
3.0	10.074	10.055	10.065	10.055	10.019	10.046	10.022	10.108	10.056
4.0	10.130	10.111	10.123	10.110	10.067	10.100	10.076	10.157	10.109
5.0	10.189	10.168	10.185	10.158	10.115	10.148	10.127	10.205	10.162
7.5	10.238	10.223	10.242	10.241	10.212	10.229	10.224	10.250	10.232
10.0	10.244	10.231	10.249	10.250	10.240	10.239	10.245	10.248	10.243
12.5	10.243	10.233	10.252	10.250	10.241	10.241	10.243	10.247	10.244

EXIT RAKE

5.0	10.086	10.048	10.065	10.058	10.024	10.053	10.044	10.097	10.059
10.0	10.233	10.224	10.235	10.226	10.194	10.214	10.213	10.241	10.222
15.0	10.246	10.242	10.250	10.249	10.245	10.242	10.243	10.244	10.245
20.0	10.242	10.243	10.246	10.248	10.241	10.241	10.241	10.240	10.243
30.0	10.238	10.238	10.242	10.245	10.234	10.242	10.240	10.234	10.239
50.0	10.235	10.238	10.240	10.241	10.246	10.245	10.243	10.242	10.241
70.0	10.244	10.242	10.240	10.242	10.247	10.242	10.241	10.239	10.242
90.0	10.245	10.239	10.238	10.243	10.246	10.241	10.239	10.243	10.242

EXIT BOUNDARY LAYER RAKE

1.0	9.943	9.918	9.947	9.932	9.909	9.930	9.924	9.956	9.932
2.0	9.976	9.960	9.981	9.963	9.938	9.960	9.949	9.989	9.964
3.0	10.009	9.993	10.015	9.995	9.965	9.992	9.979	10.022	9.996
4.0	10.042	10.028	10.051	10.028	9.994	10.023	10.010	10.057	10.029
5.0	10.076	10.065	10.089	10.066	10.027	10.058	10.048	10.093	10.065
7.5	10.165	10.161	10.185	10.157	10.113	10.147	10.140	10.184	10.157
10.0	10.226	10.231	10.244	10.228	10.191	10.222	10.219	10.237	10.225
12.5	10.240	10.247	10.252	10.244	10.234	10.246	10.247	10.243	10.244

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(u) Vane B in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 8-18

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.146	10.141	10.157	10.134	10.103	10.159	10.142	10.181	10.145
10.0	10.206	10.209	10.222	10.215	10.208	10.219	10.221	10.218	10.215
15.0	10.212	10.210	10.221	10.214	10.210	10.221	10.220	10.215	10.215
20.0	10.209	10.210	10.217	10.212	10.210	10.217	10.218	10.210	10.213
30.0	10.205	10.212	10.215	10.212	10.204	10.221	10.217	10.207	10.212
50.0	10.205	10.215	10.217	10.210	10.212	10.220	10.217	10.213	10.213
70.0	10.208	10.217	10.217	10.210	10.213	10.218	10.215	10.210	10.214
90.0	10.210	10.217	10.202	10.213	10.212	10.216	10.218	10.212	10.213

INLET BOUNDARY LAYER RAKE

1.0	10.001	9.972	9.983	9.966	9.944	9.957	9.933	10.027	9.973
2.0	10.054	10.026	10.036	10.019	9.994	10.013	9.989	10.078	10.026
3.0	10.096	10.069	10.081	10.069	10.039	10.059	10.040	10.119	10.071
4.0	10.134	10.108	10.119	10.110	10.076	10.100	10.084	10.152	10.110
5.0	10.172	10.149	10.160	10.147	10.112	10.135	10.125	10.188	10.149
7.5	10.216	10.205	10.214	10.214	10.187	10.201	10.201	10.226	10.208
10.0	10.221	10.212	10.220	10.223	10.213	10.212	10.217	10.227	10.218
12.5	10.219	10.214	10.220	10.223	10.215	10.213	10.215	10.224	10.218

EXIT RAKE

5.0	10.101	10.062	10.082	10.071	10.047	10.061	10.061	10.100	10.073
10.0	10.210	10.199	10.208	10.201	10.172	10.191	10.192	10.215	10.198
15.0	10.222	10.216	10.220	10.221	10.215	10.214	10.216	10.220	10.218
20.0	10.219	10.214	10.218	10.221	10.217	10.213	10.218	10.217	10.217
30.0	10.215	10.213	10.214	10.218	10.216	10.213	10.213	10.211	10.214
50.0	10.211	10.211	10.214	10.217	10.220	10.214	10.217	10.215	10.215
70.0	10.217	10.212	10.214	10.215	10.221	10.214	10.215	10.214	10.215
90.0	10.219	10.209	10.212	10.218	10.219	10.211	10.215	10.217	10.215

EXIT BOUNDARY LAYER RAKE

1.0	9.981	9.965	9.995	9.968	9.961	9.977	9.976	9.984	9.976
2.0	10.006	9.997	10.019	9.994	9.983	10.001	9.997	10.010	10.001
3.0	10.032	10.021	10.045	10.020	10.004	10.024	10.018	10.035	10.025
4.0	10.057	10.045	10.071	10.047	10.026	10.048	10.040	10.062	10.050
5.0	10.084	10.072	10.099	10.074	10.050	10.095	10.072	10.091	10.080
7.5	10.152	10.141	10.171	10.147	10.115	10.141	10.136	10.164	10.146
10.0	10.201	10.195	10.216	10.201	10.174	10.197	10.196	10.211	10.199
12.5	10.213	10.210	10.225	10.214	10.205	10.216	10.221	10.217	10.215

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(v) Vane B in corner 2; IGV setting, 0°; airflow, 56.55 kg/sec; readings 32-35

INLET RAKE

%	CIRCUMFERENTIAL LOCATION, DEG								
SPAN	0	45	90	135	180	225	270	315	AVG
5.0	10.155	10.130	10.141	10.137	10.117	10.138	10.129	10.170	10.140
10.0	10.190	10.184	10.188	10.191	10.188	10.184	10.190	10.195	10.189
15.0	10.191	10.185	10.189	10.195	10.189	10.186	10.190	10.193	10.190
20.0	10.187	10.184	10.186	10.195	10.189	10.183	10.186	10.188	10.188
30.0	10.184	10.180	10.184	10.193	10.188	10.185	10.185	10.187	10.186
50.0	10.185	10.184	10.187	10.191	10.192	10.186	10.187	10.192	10.188
70.0	10.187	10.185	10.186	10.189	10.190	10.184	10.185	10.189	10.187
90.0	10.190	10.183	10.184	10.193	10.190	10.183	10.185	10.192	10.187

INLET BOUNDARY LAYER RAKE

1.0	10.025	10.037	10.034	10.003	9.996	10.025	10.007	10.041	10.021
2.0	10.064	10.071	10.071	10.031	10.032	10.061	10.043	10.077	10.056
3.0	10.095	10.101	10.102	10.079	10.064	10.093	10.075	10.107	10.089
4.0	10.122	10.127	10.130	10.107	10.092	10.120	10.101	10.132	10.116
5.0	10.150	10.155	10.158	10.133	10.116	10.144	10.128	10.158	10.143
7.5	10.186	10.193	10.192	10.180	10.168	10.187	10.179	10.186	10.184
10.0	10.188	10.197	10.193	10.188	10.185	10.194	10.192	10.188	10.191
12.5	10.188	10.196	10.193	10.188	10.187	10.196	10.191	10.188	10.191

EXIT RAKE

5.0	10.099	10.092	10.104	10.085	10.065	10.097	10.099	10.103	10.093
10.0	10.179	10.180	10.189	10.173	10.158	10.178	10.182	10.184	10.178
15.0	10.186	10.193	10.197	10.190	10.185	10.194	10.196	10.187	10.191
20.0	10.183	10.193	10.195	10.189	10.185	10.192	10.194	10.184	10.189
30.0	10.181	10.190	10.194	10.188	10.184	10.191	10.192	10.181	10.188
50.0	10.181	10.189	10.194	10.187	10.187	10.192	10.194	10.186	10.189
70.0	10.184	10.190	10.193	10.185	10.185	10.190	10.195	10.185	10.188
90.0	10.185	10.187	10.192	10.187	10.185	10.190	10.193	10.184	10.188

EXIT BOUNDARY LAYER RAKE

1.0	10.041	10.009	10.019	10.035	10.028	10.014	10.011	10.043	10.025
2.0	10.057	10.032	10.038	10.051	10.042	10.029	10.025	10.060	10.042
3.0	10.074	10.050	10.057	10.067	10.057	10.045	10.041	10.078	10.059
4.0	10.092	10.069	10.076	10.083	10.073	10.062	10.058	10.095	10.076
5.0	10.109	10.097	10.097	10.102	10.091	10.103	10.078	10.113	10.099
7.5	10.153	10.141	10.149	10.145	10.134	10.129	10.127	10.160	10.142
10.0	10.188	10.180	10.183	10.182	10.174	10.171	10.171	10.189	10.180
12.5	10.194	10.188	10.190	10.192	10.193	10.188	10.188	10.194	10.191

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(w) Vane B in corner 2; IGV setting, 0°; airflow, 35.15 kg/sec; readings 22–29

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.133	10.134	10.134	10.133	10.125	10.131	10.134	10.143	10.133
10.0	10.151	10.154	10.156	10.157	10.153	10.153	10.157	10.157	10.155
15.0	10.153	10.154	10.156	10.157	10.153	10.155	10.156	10.156	10.155
20.0	10.151	10.154	10.156	10.157	10.153	10.154	10.154	10.155	10.154
30.0	10.150	10.155	10.154	10.155	10.151	10.153	10.154	10.154	10.153
50.0	10.150	10.156	10.155	10.156	10.154	10.154	10.156	10.156	10.155
70.0	10.151	10.156	10.155	10.156	10.153	10.156	10.155	10.156	10.155
90.0	10.152	10.155	10.155	10.158	10.152	10.155	10.155	10.157	10.155

INLET BOUNDARY LAYER RAKE

1.0	10.092	10.090	10.088	10.084	10.084	10.082	10.077	10.096	10.087
2.0	10.107	10.106	10.103	10.099	10.100	10.097	10.093	10.110	10.102
3.0	10.119	10.117	10.114	10.113	10.112	10.110	10.105	10.122	10.114
4.0	10.129	10.128	10.125	10.123	10.123	10.119	10.116	10.132	10.124
5.0	10.140	10.139	10.137	10.134	10.133	10.129	10.127	10.143	10.135
7.5	10.157	10.155	10.153	10.151	10.152	10.150	10.147	10.156	10.152
10.0	10.157	10.157	10.155	10.155	10.157	10.156	10.153	10.156	10.156
12.5	10.158	10.159	10.155	10.156	10.156	10.156	10.154	10.156	10.156

EXIT RAKE

5.0	10.121	10.112	10.120	10.113	10.111	10.110	10.115	10.120	10.115
10.0	10.152	10.148	10.155	10.148	10.147	10.144	10.151	10.152	10.150
15.0	10.157	10.153	10.159	10.156	10.158	10.154	10.160	10.156	10.157
20.0	10.155	10.153	10.157	10.156	10.157	10.153	10.157	10.155	10.156
30.0	10.154	10.151	10.156	10.157	10.157	10.153	10.157	10.153	10.155
50.0	10.153	10.154	10.158	10.156	10.158	10.154	10.159	10.155	10.156
70.0	10.155	10.153	10.158	10.155	10.158	10.154	10.157	10.154	10.156
90.0	10.156	10.152	10.157	10.156	10.156	10.153	10.158	10.155	10.155

EXIT BOUNDARY LAYER RAKE

1.0	10.094	10.089	10.092	10.087	10.092	10.090	10.088	10.090	10.090
2.0	10.100	10.098	10.099	10.094	10.098	10.095	10.093	10.096	10.097
3.0	10.106	10.104	10.105	10.101	10.104	10.102	10.098	10.104	10.103
4.0	10.113	10.111	10.113	10.106	10.109	10.109	10.104	10.111	10.109
5.0	10.120	10.119	10.120	10.116	10.118	10.131	10.114	10.117	10.119
7.5	10.139	10.139	10.139	10.133	10.134	10.133	10.132	10.137	10.136
10.0	10.153	10.154	10.154	10.149	10.149	10.150	10.148	10.151	10.151
12.5	10.159	10.158	10.158	10.154	10.158	10.156	10.156	10.154	10.156

TABLE V.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(x) Vane B in corner 2; IGV setting, 10°; airflow, 68.28 kg/sec; readings 10–17

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.152	10.143	10.164	10.132	10.101	10.150	10.149	10.176	10.146
10.0	10.212	10.210	10.227	10.212	10.205	10.216	10.225	10.215	10.215
15.0	10.215	10.213	10.225	10.211	10.209	10.220	10.224	10.212	10.216
20.0	10.208	10.216	10.222	10.210	10.209	10.217	10.222	10.207	10.214
30.0	10.204	10.215	10.219	10.209	10.206	10.219	10.222	10.204	10.212
50.0	10.202	10.216	10.222	10.209	10.212	10.219	10.221	10.210	10.214
70.0	10.209	10.219	10.223	10.208	10.209	10.218	10.222	10.208	10.214
90.0	10.209	10.218	10.207	10.210	10.209	10.217	10.222	10.209	10.213

INLET BOUNDARY LAYER RAKE

1.0	10.007	9.975	9.974	9.973	9.952	9.955	9.932	10.019	9.973
2.0	10.062	10.031	10.030	10.026	10.004	10.011	9.988	10.072	10.028
3.0	10.106	10.075	10.076	10.073	10.048	10.057	10.036	10.114	10.073
4.0	10.141	10.115	10.117	10.114	10.086	10.100	10.079	10.149	10.112
5.0	10.178	10.155	10.159	10.151	10.122	10.135	10.119	10.184	10.150
7.5	10.220	10.209	10.210	10.213	10.196	10.199	10.194	10.222	10.208
10.0	10.225	10.213	10.215	10.221	10.220	10.210	10.214	10.223	10.218
12.5	10.222	10.213	10.216	10.222	10.222	10.211	10.214	10.223	10.218

EXIT RAKE

5.0	10.103	10.064	10.078	10.078	10.050	10.067	10.059	10.103	10.075
10.0	10.212	10.201	10.203	10.206	10.173	10.192	10.190	10.218	10.199
15.0	10.222	10.215	10.216	10.225	10.217	10.213	10.213	10.226	10.219
20.0	10.219	10.214	10.216	10.225	10.217	10.211	10.212	10.221	10.217
30.0	10.214	10.210	10.211	10.222	10.215	10.212	10.210	10.215	10.214
50.0	10.211	10.210	10.212	10.221	10.218	10.214	10.213	10.220	10.215
70.0	10.219	10.211	10.211	10.221	10.219	10.212	10.212	10.219	10.216
90.0	10.219	10.208	10.209	10.223	10.220	10.210	10.211	10.222	10.215

EXIT BOUNDARY LAYER RAKE

1.0	9.980	9.970	9.994	9.973	9.958	9.983	9.981	9.981	9.977
2.0	10.005	10.001	10.019	9.999	9.981	10.008	10.002	10.006	10.003
3.0	10.031	10.025	10.044	10.023	10.002	10.031	10.023	10.032	10.027
4.0	10.056	10.049	10.071	10.049	10.024	10.055	10.047	10.059	10.051
5.0	10.083	10.076	10.098	10.076	10.048	10.102	10.078	10.087	10.081
7.5	10.152	10.144	10.171	10.146	10.116	10.147	10.143	10.157	10.147
10.0	10.201	10.196	10.216	10.198	10.177	10.205	10.201	10.203	10.200
12.5	10.212	10.210	10.225	10.211	10.206	10.224	10.221	10.212	10.215

TABLE V.—Concluded. TOTAL-PRESSURE DISTRIBUTION FOR DIFFUSER

[Pressures are in newtons per square centimeter.]

(y) Vane B in corner 2; IGV setting, 10°; airflow, 35.36 kg/sec; readings 21-30

INLET RAKE

% SPAN	CIRCUMFERENTIAL LOCATION, DEG 0	45	90	135	180	225	270	315	AVG
5.0	10.142	10.123	10.142	10.130	10.133	10.126	10.135	10.142	10.134
10.0	10.159	10.145	10.163	10.155	10.159	10.146	10.160	10.155	10.155
15.0	10.160	10.146	10.163	10.154	10.159	10.147	10.162	10.155	10.156
20.0	10.158	10.146	10.161	10.153	10.161	10.146	10.160	10.153	10.155
30.0	10.158	10.144	10.159	10.153	10.160	10.146	10.161	10.151	10.154
50.0	10.157	10.147	10.161	10.153	10.161	10.145	10.163	10.154	10.155
70.0	10.158	10.146	10.161	10.153	10.159	10.145	10.160	10.153	10.155
90.0	10.159	10.146	10.160	10.155	10.160	10.146	10.161	10.154	10.155

INLET BOUNDARY LAYER RAKE

1.0	10.097	10.088	10.093	10.076	10.089	10.081	10.082	10.086	10.087
2.0	10.111	10.103	10.109	10.089	10.104	10.097	10.097	10.102	10.101
3.0	10.123	10.114	10.121	10.103	10.118	10.109	10.111	10.114	10.114
4.0	10.122	10.125	10.132	10.113	10.128	10.118	10.120	10.124	10.123
5.0	10.144	10.137	10.143	10.122	10.138	10.129	10.131	10.133	10.135
7.5	10.160	10.153	10.159	10.141	10.157	10.149	10.153	10.147	10.152
10.0	10.163	10.156	10.161	10.146	10.162	10.154	10.159	10.147	10.156
12.5	10.162	10.156	10.160	10.147	10.161	10.154	10.159	10.147	10.156

EXIT RAKE

5.0	10.111	10.116	10.118	10.120	10.104	10.117	10.114	10.126	10.116
10.0	10.143	10.153	10.153	10.155	10.137	10.151	10.148	10.159	10.150
15.0	10.147	10.160	10.157	10.162	10.148	10.160	10.157	10.162	10.157
20.0	10.147	10.160	10.155	10.162	10.147	10.160	10.156	10.160	10.156
30.0	10.145	10.159	10.155	10.162	10.147	10.161	10.155	10.159	10.155
50.0	10.144	10.159	10.156	10.161	10.148	10.161	10.156	10.161	10.156
70.0	10.147	10.160	10.155	10.161	10.147	10.160	10.155	10.159	10.156
90.0	10.146	10.158	10.155	10.161	10.147	10.160	10.155	10.162	10.155

EXIT BOUNDARY LAYER RAKE

1.0	10.091	10.092	10.083	10.093	10.087	10.094	10.080	10.097	10.090
2.0	10.098	10.101	10.089	10.100	10.095	10.100	10.085	10.103	10.097
3.0	10.105	10.108	10.096	10.106	10.099	10.106	10.091	10.110	10.103
4.0	10.112	10.115	10.103	10.112	10.105	10.112	10.098	10.115	10.109
5.0	10.119	10.122	10.112	10.121	10.115	10.133	10.106	10.123	10.119
7.5	10.138	10.142	10.131	10.137	10.131	10.137	10.123	10.141	10.135
10.0	10.150	10.158	10.145	10.152	10.147	10.153	10.140	10.156	10.150
12.5	10.156	10.162	10.148	10.157	10.155	10.162	10.147	10.160	10.156

TABLE VI.—TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(a) Vane A in corner 2; IGV setting, −10°; airflow, 69.09 kg/sec; readings 281-290

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.067	10.183	10.203	10.225	10.171
30	10.099	10.200	10.236	10.221	10.214
60	9.917	10.186	10.209	10.239	10.139
90	9.871	10.228	10.181	10.045	9.967
120	10.074	10.191	10.233	10.238	10.090
150	10.103	10.205	10.237	10.206	10.176
180	10.076	10.173	10.183	10.218	10.177
210	9.865	10.069	10.202	10.223	10.130
240	10.037	10.131	10.199	10.194	10.124
270	10.053	10.151	10.170	10.181	9.975
300	10.053	10.157	10.231	10.199	10.115
330	9.876	10.068	10.183	10.233	10.172
AVG	10.008	10.162	10.206	10.202	10.121

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.089	10.146	10.106	10.142	10.233	10.228	10.210	10.198
45	10.092	10.130	10.111	10.168	10.237	10.232	10.208	10.175
75	9.931	9.953	9.984	10.119	10.233	10.178	10.202	10.067
105	10.043	10.083	10.146	10.222	10.193	10.240	10.198	10.120
135	10.112	10.112	10.133	10.168	10.236	10.192	10.208	10.161
165	10.045	10.107	10.132	10.159	10.188	10.228	10.184	10.162
195	9.909	9.957	10.017	10.075	10.167	10.223	10.220	10.146
225	9.970	9.984	9.990	10.004	10.052	10.180	10.214	10.165
255	10.010	10.037	10.063	10.092	10.162	10.172	10.169	10.128
285	10.067	10.106	10.140	10.164	10.193	10.185	10.220	10.117
315	9.944	9.947	9.951	9.965	10.026	10.160	10.217	10.180
345	9.975	10.038	10.099	10.150	10.216	10.237	10.233	10.146
AVG	10.016	10.050	10.073	10.119	10.178	10.205	10.207	10.147

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(b) Vane A in corner 2; IGV setting, 0°; airflow, 82.30 kg/sec; readings 299-302

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.039	10.204	10.230	10.264	10.184
30	10.084	10.235	10.282	10.252	10.245
60	9.833	10.214	10.241	10.285	10.144
90	9.763	10.270	10.202	10.003	9.898
120	10.044	10.228	10.269	10.284	10.072
150	10.092	10.239	10.284	10.242	10.205
180	10.058	10.195	10.209	10.254	10.198
210	9.747	10.043	10.234	10.260	10.122
240	9.993	10.123	10.216	10.219	10.117
270	10.017	10.154	10.190	10.200	9.914
300	10.011	10.171	10.273	10.228	10.101
330	9.766	10.044	10.214	10.281	10.191
AVG	9.954	10.177	10.237	10.231	10.116

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.071	10.129	10.102	10.180	10.248	10.256	10.284	10.192
45	9.908	9.997	10.026	10.168	10.273	10.216	10.266	10.035
75	9.916	10.004	10.023	10.164	10.270	10.218	10.245	10.037
105	10.080	10.075	10.086	10.135	10.224	10.226	10.251	10.173
135	10.068	10.132	10.152	10.184	10.216	10.277	10.249	10.203
165	10.064	10.130	10.150	10.183	10.215	10.269	10.247	10.186
195	9.880	9.892	9.898	9.914	9.977	10.163	10.211	10.182
225	10.006	10.034	10.071	10.111	10.199	10.229	10.211	10.102
255	9.971	10.004	10.038	10.078	10.168	10.256	10.224	10.105
285	9.878	9.888	9.892	9.910	9.995	10.194	10.270	10.171
315	9.883	9.980	10.070	10.141	10.202	10.246	10.275	10.158
345	9.888	9.981	10.075	10.143	10.203	10.245	10.275	10.173
AVG	9.968	10.020	10.049	10.109	10.182	10.233	10.251	10.143

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(c) Vane A in corner 2; IGV setting, 0°; airflow, 76.18 kg/sec; readings 295–298

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.051	10.193	10.219	10.248	10.181
30	10.086	10.220	10.261	10.246	10.232
60	9.872	10.203	10.225	10.265	10.140
90	9.808	10.252	10.191	10.019	9.931
120	10.058	10.210	10.258	10.264	10.080
150	10.096	10.224	10.264	10.224	10.186
180	10.064	10.185	10.197	10.239	10.190
210	9.796	10.049	10.218	10.246	10.129
240	10.013	10.127	10.212	10.209	10.120
270	10.031	10.152	10.181	10.194	9.941
300	10.033	10.163	10.256	10.215	10.108
330	9.816	10.052	10.202	10.263	10.184
AVG	9.977	10.169	10.224	10.219	10.119

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.077	10.137	10.097	10.129	10.250	10.196	10.263	10.208
45	10.070	10.118	10.082	10.163	10.244	10.259	10.262	10.180
75	9.936	9.993	9.992	10.127	10.257	10.203	10.249	10.051
105	10.056	10.098	10.155	10.237	10.223	10.268	10.254	10.113
135	10.084	10.062	10.091	10.141	10.200	10.199	10.244	10.160
165	10.075	10.130	10.148	10.177	10.202	10.258	10.231	10.194
195	9.873	9.939	10.018	10.088	10.175	10.203	10.201	10.139
225	9.907	9.920	9.928	9.945	10.006	10.179	10.204	10.184
255	10.018	10.046	10.076	10.113	10.190	10.207	10.201	10.105
285	10.052	10.100	10.139	10.169	10.212	10.190	10.230	10.121
315	9.906	9.916	9.921	9.940	10.010	10.175	10.229	10.143
345	9.914	9.998	10.079	10.142	10.193	10.233	10.263	10.159
AVG	9.997	10.038	10.061	10.114	10.180	10.214	10.236	10.146

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(d) Vane A in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 279–289

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.066	10.180	10.202	10.225	10.171
30	10.096	10.203	10.237	10.222	10.213
60	9.923	10.187	10.207	10.240	10.137
90	9.873	10.228	10.180	10.044	9.969
120	10.071	10.195	10.234	10.239	10.089
150	10.103	10.205	10.238	10.206	10.175
180	10.077	10.173	10.187	10.220	10.178
210	9.859	10.063	10.200	10.224	10.130
240	10.036	10.130	10.200	10.195	10.124
270	10.053	10.151	10.172	10.182	9.973
300	10.055	10.158	10.231	10.198	10.114
330	9.875	10.067	10.186	10.234	10.173
AVG	10.007	10.162	10.206	10.202	10.121

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.082	10.153	10.100	10.127	10.224	10.182	10.237	10.196
45	10.068	10.117	10.090	10.155	10.224	10.226	10.239	10.174
75	9.985	10.022	10.044	10.151	10.236	10.192	10.224	10.069
105	10.068	10.103	10.149	10.214	10.203	10.240	10.228	10.116
135	10.096	10.088	10.101	10.141	10.191	10.186	10.215	10.160
165	10.083	10.129	10.142	10.164	10.188	10.234	10.210	10.184
195	9.919	9.974	10.037	10.091	10.163	10.187	10.184	10.140
225	9.960	9.969	9.975	9.988	10.034	10.173	10.192	10.175
255	10.028	10.053	10.080	10.108	10.174	10.198	10.189	10.112
285	10.067	10.106	10.136	10.162	10.196	10.171	10.210	10.123
315	9.951	9.960	9.965	9.979	10.042	10.174	10.215	10.148
345	9.960	10.028	10.092	10.141	10.181	10.214	10.239	10.155
AVG	10.022	10.058	10.076	10.119	10.171	10.198	10.215	10.146

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(e) Vane A in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 291-294

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.116	10.140	10.150	10.154	10.140
30	10.123	10.148	10.157	10.152	10.151
60	10.081	10.146	10.149	10.158	10.135
90	10.073	10.155	10.143	10.113	10.093
120	10.113	10.146	10.155	10.157	10.122
150	10.123	10.149	10.157	10.149	10.143
180	10.118	10.141	10.144	10.154	10.143
210	10.067	10.116	10.148	10.154	10.133
240	10.108	10.130	10.147	10.148	10.132
270	10.112	10.138	10.143	10.144	10.089
300	10.110	10.137	10.155	10.149	10.129
330	10.071	10.116	10.145	10.157	10.142
AVG	10.101	10.138	10.149	10.149	10.129

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.120	10.131	10.123	10.138	10.157	10.159	10.159	10.142
45	10.091	10.106	10.196	10.130	10.155	10.144	10.151	10.118
75	10.091	10.106	10.107	10.131	10.153	10.145	10.151	10.118
105	10.119	10.119	10.122	10.130	10.149	10.148	10.151	10.138
135	10.119	10.129	10.132	10.136	10.146	10.157	10.149	10.141
165	10.117	10.127	10.131	10.135	10.144	10.156	10.148	10.139
195	10.091	10.094	10.096	10.099	10.111	10.141	10.147	10.144
225	10.098	10.107	10.114	10.122	10.138	10.148	10.143	10.127
255	10.098	10.106	10.112	10.120	10.136	10.150	10.146	10.129
285	10.088	10.091	10.092	10.097	10.112	10.141	10.149	10.136
315	10.090	10.105	10.122	10.132	10.142	10.150	10.155	10.140
345	10.089	10.105	10.121	10.132	10.141	10.149	10.154	10.140
AVG	10.101	10.110	10.115	10.125	10.140	10.149	10.150	10.134

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(f) Vane A in corner 2; IGV setting, 10°; airflow, 68.41 kg/sec; readings 280–288

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.066	10.179	10.201	10.224	10.171
30	10.094	10.204	10.236	10.223	10.213
60	9.926	10.188	10.206	10.240	10.139
90	9.872	10.228	10.180	10.043	9.969
120	10.066	10.199	10.235	10.238	10.089
150	10.106	10.203	10.236	10.206	10.176
180	10.074	10.172	10.191	10.222	10.177
210	9.857	10.062	10.198	10.225	10.129
240	10.036	10.131	10.201	10.196	10.124
270	10.054	10.151	10.171	10.181	9.974
300	10.054	10.157	10.230	10.199	10.114
330	9.878	10.068	10.187	10.233	10.173
AVG	10.007	10.162	10.206	10.203	10.121

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.063	10.149	10.120	10.142	10.178	10.228	10.185	10.155
45	10.080	10.134	10.121	10.175	10.187	10.182	10.212	10.177
75	9.982	10.073	10.103	10.176	10.203	10.220	10.224	10.078
105	10.010	9.977	10.013	10.132	10.238	10.211	10.236	10.104
135	10.087	10.085	10.086	10.130	10.227	10.202	10.239	10.140
165	10.099	10.115	10.111	10.142	10.232	10.187	10.241	10.202
195	9.921	9.973	10.034	10.088	10.166	10.219	10.232	10.169
225	9.943	9.951	9.959	9.972	10.019	10.147	10.227	10.192
255	10.049	10.075	10.105	10.133	10.185	10.209	10.199	10.102
285	10.048	10.088	10.120	10.150	10.188	10.161	10.179	10.121
315	9.963	9.972	9.982	9.995	10.050	10.179	10.192	10.135
345	9.947	10.017	10.075	10.121	10.192	10.205	10.195	10.169
AVG	10.016	10.051	10.069	10.113	10.172	10.196	10.213	10.145

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(g) Vane A2 in corner 2; IGV setting, 0°; airflow, 82.13 kg/sec; readings 307–310

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.034	10.214	10.257	10.249	10.186
30	10.073	10.259	10.178	10.249	10.133
60	9.888	10.251	10.261	10.187	10.080
90	9.583	10.181	10.240	10.132	9.903
120	10.073	10.266	10.244	10.177	10.079
150	10.077	10.264	10.195	10.262	10.097
180	10.050	10.238	10.243	10.248	10.203
210	9.801	10.024	10.187	10.252	10.134
240	10.102	10.192	10.224	10.242	10.106
270	10.068	10.17.	10.175	10.192	9.992
300	10.057	10.211	10.222	10.239	10.094
330	9.792	10.044	10.234	10.206	10.213
AVG	9.967	10.193	10.222	10.220	10.102

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.040	10.091	10.054	10.137	10.258	10.178	10.195	10.144
45	9.732	9.762	9.827	10.041	10.259	10.263	10.192	10.037
75	9.745	9.770	9.819	10.026	10.259	10.262	10.211	10.024
105	10.061	10.048	10.049	10.109	10.260	10.242	10.227	10.074
135	10.046	10.090	10.099	10.159	10.263	10.207	10.223	10.188
165	10.044	10.090	10.099	10.159	10.264	10.208	10.232	10.181
195	10.000	9.980	9.964	9.973	10.067	10.224	10.259	10.178
225	9.978	10.013	10.046	10.085	10.176	10.218	10.229	10.086
255	9.971	10.007	10.039	10.077	10.166	10.213	10.234	10.086
285	9.979	9.973	9.966	9.983	10.078	10.253	10.218	10.148
315	9.878	9.955	10.035	10.117	10.236	10.206	10.202	10.160
345	9.878	9.954	10.038	10.118	10.235	10.205	10.207	10.205
AVG	9.946	9.978	10.003	10.082	10.210	10.223	10.219	10.126

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(h) Vane A2 in corner 2; IGV setting, 0°; airflow, 76.09 kg/sec; readings 303–306

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.046	10.204	10.240	10.235	10.179
30	10.078	10.242	10.173	10.235	10.135
60	9.920	10.240	10.245	10.180	10.083
90	9.651	10.172	10.226	10.130	9.936
120	10.081	10.249	10.230	10.170	10.086
150	10.086	10.248	10.18∂	10.245	10.102
180	10.062	10.224	10.228	10.234	10.194
210	9.843	10.036	10.179	10.230	10.136
240	10.107	10.185	10.211	10.228	10.111
270	10.077	10.166	10.171	10.184	10.010
300	10.068	10.200	10.209	10.225	10.100
330	9.833	10.055	10.224	10.194	10.204
AVG	9.988	10.185	10.210	10.208	10.106

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.049	10.136	10.095	10.149	10.229	10.235	10.201	10.187
45	10.054	10.106	10.055	10.135	10.241	10.171	10.194	10.146
75	9.781	9.811	9.853	10.035	10.243	10.247	10.184	10.046
105	10.008	9.981	9.953	10.037	10.250	10.215	10.230	10.127
135	10.067	10.060	10.062	10.114	10.240	10.226	10.217	10.082
165	10.055	10.095	10.104	10.154	10.247	10.195	10.213	10.180
195	9.805	9.838	9.887	9.958	10.126	10.238	10.232	10.219
225	10.019	10.006	9.990	9.996	10.070	10.210	10.242	10.172
255	9.996	10.028	10.054	10.088	10.169	10.206	10.215	10.092
285	10.082	10.120	10.150	10.176	10.224	10.221	10.221	10.108
315	9.999	9.996	9.988	9.999	10.084	10.238	10.208	10.148
345	9.916	9.983	10.056	10.127	10.225	10.196	10.194	10.156
AVG	9.986	10.013	10.021	10.081	10.196	10.217	10.213	10.138

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(i) Vane A2 in corner 2; IGV setting, 0°; airflow, 69.14 kg/sec; readings 311-314

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.063	10.189	10.220	10.214	10.167
30	10.088	10.222	10.164	10.214	10.136
60	9.959	10.218	10.225	10.171	10.093
90	9.756	10.163	10.209	10.133	9.974
120	10.085	10.225	10.210	10.162	10.090
150	10.094	10.226	10.176	10.222	10.112
180	10.074	10.205	10.201	10.214	10.180
210	9.899	10.054	10.169	10.216	10.138
240	10.110	10.175	10.192	10.210	10.117
270	10.088	10.162	10.166	10.175	10.033
300	10.078	10.185	10.191	10.208	10.108
330	9.893	10.071	10.208	10.185	10.188
AVG	10.016	10.175	10.194	10.194	10.111

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.060	10.130	10.100	10.143	10.213	10.223	10.184	10.175
45	10.070	10.109	10.080	10.137	10.223	10.165	10.182	10.145
75	9.834	9.876	9.943	10.105	10.220	10.223	10.170	10.060
105	10.038	10.001	9.976	10.049	10.225	10.197	10.213	10.127
135	10.083	10.074	10.077	10.124	10.226	10.210	10.204	10.096
165	10.066	10.096	10.102	10.143	10.221	10.181	10.193	10.168
195	9.872	9.900	9.941	10.000	10.129	10.214	10.213	10.206
225	10.039	10.027	10.020	10.027	10.085	10.195	10.225	10.170
255	10.014	10.041	10.064	10.092	10.158	10.189	10.197	10.098
285	10.094	10.121	10.147	10.170	10.211	10.202	10.203	10.116
315	10.027	10.022	10.019	10.031	10.094	10.219	10.196	10.149
345	9.949	10.002	10.062	10.117	10.201	10.183	10.178	10.145
AVG	10.012	10.033	10.044	10.095	10.184	10.200	10.196	10.138

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(j) Vane A2 in corner 2; IGV setting, 0°; airflow, 35.45 kg/sec; readings 315-318

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.116	10.145	10.153	10.152	10.138
30	10.119	10.153	10.139	10.152	10.134
60	10.090	10.153	10.155	10.140	10.121
90	10.048	10.141	10.153	10.133	10.094
120	10.115	10.153	10.149	10.137	10.120
150	10.122	10.154	10.141	10.155	10.132
180	10.118	10.145	10.151	10.151	10.140
210	10.076	10.112	10.140	10.151	10.134
240	10.125	10.141	10.145	10.150	10.131
270	10.122	10.139	10.141	10.142	10.107
300	10.118	10.142	10.144	10.150	10.127
330	10.075	10.116	10.151	10.144	10.145
AVG	10.104	10.141	10.147	10.146	10.127

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.117	10.138	10.119	10.130	10.152	10.139	10.146	10.136
45	10.055	10.074	10.087	10.124	10.154	10.155	10.141	10.112
75	10.056	10.076	10.087	10.127	10.156	10.157	10.134	10.115
105	10.116	10.114	10.114	10.123	10.153	10.151	10.147	10.124
135	10.112	10.120	10.122	10.131	10.153	10.143	10.147	10.143
165	10.116	10.123	10.125	10.137	10.156	10.146	10.151	10.141
195	10.111	10.109	10.106	10.106	10.120	10.144	10.155	10.142
225	10.102	10.109	10.114	10.120	10.134	10.144	10.147	10.126
255	10.103	10.110	10.116	10.122	10.138	10.147	10.149	10.128
285	10.106	10.106	10.105	10.106	10.123	10.153	10.146	10.136
315	10.091	10.104	10.117	10.130	10.148	10.145	10.144	10.134
345	10.093	10.105	10.120	10.130	10.150	10.147	10.147	10.145
AVG	10.098	10.107	10.111	10.124	10.145	10.148	10.146	10.132

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(k) Vane A3 in corner 2; IGV setting, 0°; airflow, 76.16 kg/sec; readings 327–330

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.056	10.181	10.205	10.243	10.196
30	10.086	10.214	10.260	10.239	10.225
60	9.853	10.209	10.225	10.263	10.141
90	9.830	10.248	10.195	10.024	9.929
120	10.051	10.194	10.247	10.263	10.087
150	10.095	10.222	10.264	10.216	10.167
180	10.076	10.185	10.187	10.224	10.198
210	9.782	10.011	10.210	10.249	10.128
240	10.051	10.135	10.222	10.215	10.111
270	10.108	10.145	10.185	10.194	9.936
300	10.071	10.165	10.249	10.221	10.096
330	9.809	10.025	10.191	10.256	10.190
AVG	9.989	10.161	10.220	10.217	10.117

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.054	10.151	10.097	10.127	10.246	10.197	10.259	10.196
45	10.066	10.116	10.076	10.152	10.248	10.256	10.260	10.179
75	9.931	10.019	10.027	10.141	10.250	10.199	10.245	10.051
105	10.054	10.084	10.132	10.214	10.231	10.262	10.253	10.107
135	10.084	10.073	10.088	10.132	10.207	10.207	10.236	10.163
165	10.063	10.117	10.153	10.178	10.202	10.255	10.233	10.202
195	9.854	9.922	9.998	10.063	10.159	10.204	10.205	10.155
225	9.925	9.929	9.928	9.942	10.009	10.194	10.203	10.167
255	10.027	10.054	10.063	10.075	10.128	10.246	10.208	10.099
285	10.086	10.112	10.123	10.137	10.188	10.179	10.224	10.115
315	9.916	9.923	9.926	9.943	10.013	10.169	10.228	10.139
345	9.912	9.995	10.081	10.143	10.196	10.239	10.261	10.192
AVG	9.998	10.041	10.058	10.104	10.173	10.217	10.235	10.147

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(l) Vane A3 in corner 2; IGV setting, 0°; airflow, 69.19 kg/sec; readings 323-326

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.073	10.172	10.192	10.223	10.182
30	10.092	10.196	10.236	10.218	10.207
60	9.911	10.193	10.208	10.238	10.141
90	9.880	10.226	10.182	10.044	9.967
120	10.063	10.177	10.227	10.238	10.093
150	10.103	10.204	10.239	10.199	10.163
180	10.086	10.173	10.177	10.209	10.183
210	9.849	10.037	10.192	10.228	10.130
240	10.065	10.137	10.207	10.200	10.118
270	10.112	10.146	10.177	10.180	9.971
300	10.084	10.158	10.228	10.205	10.104
330	9.872	10.047	10.179	10.232	10.179
AVG	10.016	10.155	10.204	10.201	10.120

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.082	10.126	10.091	10.150	10.227	10.240	10.241	10.175
45	9.969	10.029	10.043	10.132	10.222	10.183	10.220	10.064
75	9.972	10.034	10.049	10.138	10.223	10.187	10.213	10.063
105	10.099	10.089	10.100	10.136	10.200	10.195	10.221	10.163
135	10.073	10.125	10.145	10.167	10.185	10.230	10.206	10.186
165	10.076	10.126	10.146	10.167	10.183	10.226	10.205	10.175
195	9.968	9.970	9.976	9.990	10.045	10.185	10.194	10.177
225	10.057	10.073	10.076	10.084	10.130	10.218	10.189	10.101
255	10.078	10.083	10.080	10.083	10.126	10.215	10.189	10.105
285	9.961	9.967	9.971	9.981	10.040	10.168	10.213	10.143
315	9.950	10.015	10.084	10.137	10.179	10.215	10.234	10.178
345	9.951	10.015	10.084	10.135	10.177	10.212	10.228	10.181
AVG	10.020	10.054	10.070	10.108	10.161	10.206	10.213	10.143

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(m) Vane A3 in corner 2; IGV setting, 0°; airflow, 35.51 kg/sec; readings 319-322

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.118	10.141	10.148	10.154	10.143
30	10.122	10.147	10.157	10.152	10.150
60	10.081	10.147	10.150	10.158	10.136
90	10.071	10.155	10.143	10.112	10.091
120	10.112	10.143	10.155	10.155	10.123
150	10.123	10.149	10.158	10.148	10.140
180	10.119	10.141	10.142	10.152	10.145
210	10.064	10.108	10.144	10.156	10.133
240	10.111	10.130	10.148	10.148	10.131
270	10.125	10.137	10.144	10.141	10.090
300	10.121	10.139	10.155	10.151	10.127
330	10.070	10.110	10.144	10.155	10.143
AVG	10.103	10.137	10.149	10.148	10.129

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.114	10.145	10.123	10.128	10.150	10.143	10.153	10.143
45	10.119	10.137	10.121	10.135	10.155	10.158	10.158	10.142
75	10.091	10.115	10.110	10.131	10.154	10.144	10.152	10.116
105	10.110	10.115	10.125	10.143	10.146	10.155	10.150	10.126
135	10.118	10.119	10.123	10.130	10.150	10.148	10.151	10.138
165	10.116	10.128	10.133	10.137	10.144	10.155	10.147	10.144
195	10.075	10.088	10.103	10.114	10.134	10.144	10.144	10.134
225	10.092	10.094	10.095	10.099	10.110	10.144	10.148	10.144
255	10.117	10.119	10.118	10.119	10.129	10.150	10.145	10.127
285	10.113	10.119	10.120	10.124	10.138	10.141	10.149	10.129
315	10.091	10.092	10.094	10.096	10.110	10.142	10.149	10.135
345	10.089	10.104	10.119	10.132	10.142	10.150	10.155	10.147
AVG	10.104	10.114	10.115	10.124	10.138	10.148	10.150	10.135

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(n) Vane A4 in corner 2; IGV setting, 0°; airflow, 76.29 kg/sec; readings 331-334

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.036	10.191	10.238	10.237	10.178
30	10.066	10.239	10.169	10.231	10.139
60	9.860	10.231	10.238	10.175	10.078
90	9.710	10.180	10.221	10.116	9.930
120	10.080	10.243	10.219	10.173	10.078
150	10.079	10.244	10.177	10.243	10.106
180	10.058	10.217	10.225	10.230	10.192
210	9.845	10.041	10.183	10.240	10.137
240	10.114	10.188	10.207	10.234	10.110
270	10.107	10.165	10.174	10.183	10.008
300	10.142	10.211	10.220	10.229	10.092
330	9.835	10.035	10.205	10.204	10.197
AVG	9.994	10.182	10.206	10.208	10.104

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.043	10.091	10.060	10.139	10.238	10.188	10.178	10.135
45	9.868	9.889	9.828	9.948	10.230	10.241	10.189	10.038
75	9.876	9.899	9.836	9.962	10.235	10.243	10.204	10.032
105	10.070	10.066	10.060	10.116	10.242	10.233	10.237	10.084
135	10.049	10.087	10.096	10.144	10.242	10.188	10.211	10.187
165	10.052	10.091	10.097	10.147	10.239	10.193	10.217	10.181
195	10.031	10.012	9.999	10.007	10.080	10.208	10.241	10.175
225	10.062	10.081	10.099	10.123	10.172	10.210	10.213	10.087
255	10.077	10.089	10.098	10.113	10.160	10.210	10.216	10.091
285	9.985	9.995	9.983	9.993	10.077	10.238	10.203	10.138
315	9.879	9.932	10.000	10.076	10.203	10.195	10.195	10.151
345	9.885	9.943	10.009	10.081	10.207	10.196	10.200	10.190
AVG	9.990	10.014	10.014	10.071	10.194	10.212	10.209	10.124

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(o) Vane A4 in corner 2; IGV setting, 0°; airflow, 69.31 kg/sec; readings 335–338

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.055	10.180	10.220	10.218	10.170
30	10.079	10.219	10.162	10.216	10.139
60	9.907	10.212	10.220	10.168	10.088
90	9.788	10.171	10.205	10.117	9.968
120	10.087	10.223	10.204	10.164	10.088
150	10.089	10.224	10.167	10.224	10.112
180	10.072	10.199	10.210	10.213	10.179
210	9.897	10.059	10.171	10.220	10.139
240	10.113	10.177	10.192	10.216	10.116
270	10.111	10.161	10.170	10.171	10.028
300	10.137	10.193	10.203	10.214	10.102
330	9.890	10.050	10.195	10.190	10.183
AVG	10.019	10.172	10.193	10.194	10.109

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.043	10.128	10.094	10.135	10.212	10.220	10.184	10.176
45	10.063	10.112	10.075	10.141	10.224	10.180	10.172	10.140
75	9.911	9.943	9.889	9.995	10.215	10.221	10.176	10.055
105	10.034	10.010	9.998	10.078	10.226	10.183	10.214	10.123
135	10.084	10.077	10.076	10.120	10.226	10.207	10.221	10.097
165	10.061	10.095	10.104	10.141	10.220	10.176	10.198	10.176
195	9.865	9.880	9.905	9.950	10.080	10.208	10.207	10.199
225	10.053	10.038	10.025	10.030	10.090	10.191	10.225	10.170
255	10.072	10.088	10.102	10.120	10.163	10.183	10.196	10.096
285	10.061	10.090	10.117	10.142	10.182	10.197	10.205	10.113
315	10.040	10.026	10.016	10.022	10.092	10.223	10.190	10.143
345	9.927	9.976	10.030	10.092	10.192	10.185	10.183	10.147
AVG	10.018	10.039	10.036	10.081	10.177	10.198	10.198	10.136

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(p) Vane A4 in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 339–342

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.115	10.143	10.154	10.153	10.140
30	10.115	10.153	10.139	10.151	10.134
60	10.080	10.152	10.152	10.141	10.123
90	10.052	10.140	10.153	10.130	10.094
120	10.116	10.153	10.146	10.139	10.119
150	10.121	10.154	10.141	10.155	10.132
180	10.117	10.147	10.152	10.151	10.140
210	10.077	10.113	10.140	10.153	10.132
240	10.124	10.141	10.146	10.152	10.129
270	10.126	10.139	10.143	10.141	10.106
300	10.131	10.144	10.146	10.151	10.126
330	10.075	10.112	10.148	10.145	10.143
AVG	10.104	10.141	10.147	10.147	10.126

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.116	10.132	10.118	10.132	10.153	10.142	10.142	10.135
45	10.078	10.100	10.077	10.104	10.152	10.154	10.140	10.111
75	10.078	10.099	10.077	10.102	10.151	10.152	10.144	10.111
105	10.119	10.116	10.114	10.124	10.155	10.153	10.152	10.125
135	10.113	10.121	10.123	10.132	10.153	10.141	10.149	10.142
165	10.112	10.121	10.123	10.133	10.152	10.142	10.148	10.138
195	10.114	10.110	10.108	10.110	10.124	10.145	10.156	10.143
225	10.116	10.121	10.123	10.125	10.134	10.148	10.145	10.127
255	10.118	10.121	10.123	10.126	10.135	10.148	10.145	10.128
285	10.110	10.107	10.105	10.107	10.123	10.154	10.147	10.137
315	10.088	10.099	10.111	10.124	10.146	10.146	10.144	10.136
345	10.085	10.097	10.110	10.122	10.145	10.144	10.144	10.142
AVG	10.104	10.112	10.109	10.120	10.143	10.147	10.146	10.131

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(q) Vane B in corner 2; IGV setting, −10°; airflow, 68.98 kg/sec; readings 9-19

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.035	10.179	10.177	10.165	10.137
30	10.091	10.176	10.179	10.197	10.120
60	10.027	10.208	10.190	10.209	10.103
90	9.861	10.195	10.190	10.153	10.015
120	10.066	10.217	10.205	10.212	10.118
150	10.098	10.204	10.195	10.191	10.138
180	10.057	10.178	10.166	10.172	10.146
210	9.975	10.156	10.185	10.191	10.137
240	10.046	10.146	10.186	10.181	10.102
270	10.111	10.164	10.125	10.153	10.043
300	10.056	10.162	10.190	10.178	10.099
330	9.967	10.149	10.188	10.179	10.126
AVG	10.033	10.178	10.181	10.182	10.107

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.036	10.088	10.087	10.109	10.182	10.179	10.159	10.129
45	10.050	10.075	10.095	10.154	10.203	10.207	10.187	10.161
75	9.897	9.991	10.087	10.181	10.192	10.186	10.177	10.131
105	9.997	10.080	10.153	10.193	10.208	10.200	10.182	10.091
135	10.046	10.090	10.133	10.176	10.181	10.208	10.167	10.150
165	10.005	10.048	10.082	10.109	10.185	10.202	10.173	10.174
195	9.960	10.010	10.062	10.103	10.161	10.166	10.185	10.132
225	10.033	10.047	10.065	10.093	10.151	10.185	10.182	10.127
255	10.059	10.078	10.094	10.108	10.143	10.183	10.154	10.109
285	10.027	10.049	10.068	10.088	10.128	10.189	10.178	10.099
315	10.025	10.030	10.060	10.083	10.139	10.179	10.180	10.122
345	10.024	10.063	10.087	10.113	10.149	10.166	10.179	10.145
AVG	10.013	10.054	10.089	10.126	10.168	10.188	10.175	10.131

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(r) Vane B in corner 2; IGV setting, −10°; airflow, 35.35 kg/sec; readings 20–31

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.112	10.147	10.144	10.146	10.139
30	10.120	10.144	10.143	10.149	10.130
60	10.099	10.152	10.144	10.146	10.129
90	10.068	10.148	10.150	10.131	10.105
120	10.112	10.151	10.146	10.143	10.130
150	10.120	10.143	10.144	10.146	10.132
180	10.116	10.146	10.147	10.148	10.143
210	10.091	10.138	10.150	10.147	10.130
240	10.106	10.130	10.147	10.147	10.125
270	10.126	10.142	10.131	10.135	10.107
300	10.114	10.133	10.146	10.146	10.124
330	10.087	10.130	10.147	10.146	10.132
AVG	10.106	10.142	10.145	10.144	10.127

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.113	10.141	10.128	10.142	10.151	10.152	10.152	10.142
45	10.076	10.114	10.128	10.148	10.142	10.145	10.147	10.124
75	10.065	10.107	10.123	10.145	10.141	10.148	10.146	10.125
105	10.113	10.121	10.131	10.142	10.152	10.151	10.150	10.138
135	10.110	10.124	10.133	10.141	10.154	10.156	10.154	10.150
165	10.100	10.116	10.124	10.135	10.147	10.152	10.149	10.137
195	10.106	10.111	10.116	10.124	10.140	10.152	10.151	10.134
225	10.113	10.121	10.127	10.133	10.145	10.146	10.146	10.131
255	10.107	10.113	10.119	10.124	10.138	10.139	10.139	10.125
285	10.104	10.110	10.116	10.124	10.139	10.147	10.153	10.134
315	10.111	10.118	10.124	10.130	10.140	10.155	10.154	10.147
345	10.104	10.110	10.119	10.125	10.135	10.144	10.148	10.137
AVG	10.102	10.117	10.124	10.134	10.144	10.149	10.149	10.135

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(s) Vane B in corner 2; IGV setting, 0°; airflow, 76.17 kg/sec; readings 41–44

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	9.989	10.192	10.189	10.175	10.137
30	10.073	10.211	10.208	10.222	10.127
60	9.989	10.235	10.226	10.238	10.089
90	9.752	10.228	10.202	10.137	9.953
120	10.026	10.242	10.241	10.239	10.126
150	10.084	10.205	10.232	10.208	10.150
180	10.031	10.186	10.172	10.180	10.149
210	9.921	10.172	10.203	10.214	10.136
240	10.025	10.159	10.210	10.201	10.093
270	10.104	10.174	10.129	10.160	10.012
300	10.036	10.175	10.212	10.193	10.091
330	9.914	10.163	10.205	10.200	10.118
AVG	9.995	10.195	10.203	10.197	10.099

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.025	10.108	10.077	10.101	10.212	10.218	10.182	10.170
45	10.045	10.071	10.061	10.151	10.222	10.203	10.241	10.137
75	9.908	9.996	10.087	10.171	10.219	10.193	10.226	10.153
105	10.002	10.044	10.134	10.230	10.240	10.244	10.198	10.058
135	10.022	10.067	10.097	10.139	10.204	10.225	10.216	10.165
165	9.968	10.035	10.071	10.109	10.229	10.177	10.220	10.147
195	9.929	9.995	10.059	10.108	10.187	10.210	10.180	10.146
225	9.995	10.005	10.035	10.078	10.152	10.203	10.210	10.113
255	10.043	10.061	10.075	10.089	10.134	10.225	10.187	10.097
285	10.008	10.043	10.070	10.100	10.158	10.220	10.198	10.092
315	9.998	10.026	10.061	10.098	10.161	10.192	10.194	10.122
345	9.981	10.038	10.078	10.105	10.150	10.178	10.204	10.165
AVG	9.994	10.041	10.075	10.123	10.189	10.207	10.205	10.130

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(t) Vane B in corner 2; IGV setting, 0°; airflow, 73.99 kg/sec; readings 36-40

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.004	10.194	10.191	10.173	10.138
30	10.078	10.195	10.209	10.208	10.121
60	9.997	10.238	10.216	10.232	10.087
90	9.764	10.220	10.194	10.143	9.964
120	10.034	10.245	10.229	10.237	10.128
150	10.089	10.237	10.233	10.196	10.147
180	10.032	10.179	10.169	10.175	10.148
210	9.926	10.168	10.200	10.209	10.138
240	10.027	10.157	10.205	10.196	10.094
270	10.103	10.172	10.128	10.158	10.014
300	10.038	10.175	10.209	10.192	10.091
330	9.921	10.159	10.206	10.193	10.121
AVG	10.001	10.195	10.199	10.193	10.099

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.039	10.086	10.062	10.151	10.221	10.194	10.224	10.128
45	9.914	10.011	10.099	10.183	10.219	10.196	10.218	10.154
75	9.908	10.005	10.094	10.185	10.216	10.202	10.215	10.150
105	10.027	10.062	10.088	10.129	10.208	10.224	10.201	10.151
135	9.969	10.036	10.068	10.100	10.214	10.171	10.213	10.147
165	9.966	10.035	10.071	10.103	10.224	10.176	10.217	10.176
195	9.993	10.007	10.034	10.075	10.148	10.196	10.204	10.111
225	10.041	10.050	10.076	10.090	10.134	10.220	10.185	10.098
255	10.030	10.052	10.069	10.086	10.135	10.226	10.196	10.107
285	9.997	10.026	10.061	10.097	10.154	10.188	10.188	10.117
315	9.980	10.042	10.080	10.107	10.149	10.180	10.201	10.164
345	9.986	10.044	10.083	10.110	10.151	10.179	10.203	10.192
AVG	9.987	10.038	10.074	10.118	10.181	10.196	10.205	10.141

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(u) Vane B in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 8–18

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.037	10.179	10.176	10.165	10.139
30	10.096	10.176	10.181	10.197	10.122
60	10.029	10.210	10.191	10.209	10.102
90	9.864	10.195	10.186	10.148	10.018
120	10.062	10.217	10.206	10.211	10.117
150	10.099	10.201	10.194	10.188	10.139
180	10.054	10.174	10.166	10.174	10.148
210	9.976	10.156	10.186	10.192	10.137
240	10.047	10.146	10.184	10.180	10.103
270	10.110	10.164	10.126	10.153	10.040
300	10.056	10.161	10.190	10.178	10.099
330	9.968	10.150	10.187	10.179	10.127
AVG	10.033	10.178	10.181	10.181	10.107

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.037	10.088	10.085	10.104	10.183	10.194	10.168	10.150
45	10.062	10.079	10.082	10.148	10.207	10.177	10.196	10.136
75	9.962	10.045	10.104	10.174	10.196	10.179	10.202	10.146
105	10.020	10.044	10.114	10.195	10.208	10.188	10.180	10.059
135	10.047	10.065	10.086	10.125	10.197	10.190	10.188	10.149
165	10.011	10.061	10.086	10.108	10.191	10.166	10.186	10.156
195	9.971	10.020	10.066	10.103	10.167	10.190	10.168	10.131
225	10.025	10.036	10.056	10.086	10.143	10.181	10.187	10.116
255	10.063	10.079	10.091	10.101	10.136	10.198	10.175	10.110
285	10.024	10.049	10.074	10.099	10.144	10.189	10.176	10.097
315	10.028	10.052	10.077	10.104	10.145	10.170	10.178	10.116
345	10.022	10.066	10.093	10.113	10.133	10.177	10.186	10.158
AVG	10.023	10.057	10.084	10.122	10.171	10.183	10.183	10.127

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(v) Vane B in corner 2; IGV setting, 0°; airflow, 56.55 kg/sec; readings 32-35

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.069	10.164	10.166	10.160	10.140
30	10.108	10.171	10.157	10.179	10.130
60	10.055	10.183	10.167	10.180	10.116
90	9.958	10.173	10.172	10.143	10.072
120	10.083	10.185	10.175	10.170	10.119
150	10.111	10.183	10.164	10.174	10.134
180	10.080	10.160	10.167	10.169	10.149
210	10.024	10.144	10.172	10.170	10.134
240	10.069	10.137	10.172	10.165	10.111
270	10.116	10.156	10.125	10.145	10.069
300	10.078	10.145	10.172	10.164	10.108
330	10.019	10.138	10.177	10.163	10.130
AVG	10.064	10.162	10.165	10.165	10.118

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.080	10.130	10.110	10.125	10.176	10.176	10.166	10.149
45	10.091	10.119	10.105	10.146	10.187	10.171	10.179	10.148
75	9.999	10.066	10.112	10.163	10.173	10.162	10.174	10.119
105	10.063	10.078	10.123	10.176	10.179	10.169	10.165	10.096
135	10.081	10.090	10.106	10.139	10.183	10.177	10.163	10.149
165	10.045	10.079	10.092	10.109	10.171	10.153	10.158	10.155
195	10.040	10.070	10.094	10.115	10.158	10.173	10.163	10.132
225	10.067	10.073	10.087	10.108	10.148	10.173	10.177	10.127
255	10.070	10.083	10.092	10.103	10.130	10.172	10.159	10.112
285	10.067	10.086	10.099	10.116	10.149	10.172	10.169	10.116
315	10.068	10.084	10.100	10.118	10.149	10.163	10.169	10.130
345	10.049	10.079	10.097	10.097	10.137	10.167	10.163	10.143
AVG	10.060	10.086	10.101	10.126	10.162	10.169	10.167	10.132

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(w) Vane B in corner 2; IGV setting, 0°; airflow, 35.15 kg/sec; readings 22–29

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.113	10.147	10.145	10.146	10.139
30	10.120	10.143	10.142	10.149	10.131
60	10.100	10.151	10.143	10.147	10.129
90	10.069	10.147	10.149	10.131	10.107
120	10.109	10.151	10.145	10.144	10.130
150	10.123	10.143	10.144	10.146	10.131
180	10.115	10.146	10.144	10.147	10.144
210	10.090	10.137	10.150	10.147	10.132
240	10.107	10.131	10.147	10.148	10.125
270	10.127	10.142	10.130	10.136	10.106
300	10.113	10.134	10.146	10.146	10.124
330	10.087	10.130	10.148	10.145	10.132
AVG	10.106	10.142	10.144	10.144	10.128

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.117	10.142	10.122	10.137	10.149	10.146	10.150	10.138
45	10.101	10.132	10.131	10.148	10.145	10.144	10.145	10.124
75	10.101	10.131	10.130	10.146	10.145	10.143	10.146	10.128
105	10.104	10.106	10.115	10.132	10.150	10.145	10.146	10.138
135	10.115	10.119	10.128	10.139	10.150	10.147	10.153	10.145
165	10.115	10.119	10.128	10.138	10.149	10.146	10.152	10.141
195	10.099	10.101	10.107	10.117	10.135	10.149	10.151	10.130
225	10.109	10.113	10.117	10.122	10.134	10.148	10.147	10.127
255	10.108	10.112	10.117	10.120	10.132	10.148	10.147	10.127
285	10.102	10.110	10.117	10.126	10.139	10.148	10.144	10.131
315	10.101	10.114	10.122	10.127	10.140	10.143	10.147	10.140
345	10.102	10.115	10.123	10.128	10.141	10.144	10.144	10.145
AVG	10.106	10.118	10.121	10.132	10.142	10.146	10.148	10.134

TABLE VI.—Continued. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(x) Vane B in corner 2; IGV setting, 10°; airflow, 68.28 kg/sec; readings 10–17

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.038	10.180	10.177	10.163	10.136
30	10.096	10.173	10.181	10.195	10.125
60	10.033	10.210	10.190	10.208	10.105
90	9.866	10.194	10.185	10.153	10.021
120	10.058	10.215	10.207	10.210	10.115
150	10.101	10.204	10.198	10.184	10.138
180	10.054	10.173	10.169	10.177	10.151
210	9.975	10.154	10.185	10.189	10.137
240	10.047	10.144	10.184	10.180	10.103
270	10.110	10.164	10.127	10.151	10.040
300	10.058	10.161	10.190	10.177	10.099
330	9.968	10.152	10.183	10.180	10.128
AVG	10.034	10.177	10.181	10.181	10.108

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.048	10.089	10.085	10.121	10.184	10.163	10.190	10.140
45	10.072	10.087	10.074	10.151	10.170	10.193	10.193	10.141
75	10.042	10.116	10.139	10.196	10.191	10.190	10.189	10.111
105	9.942	9.938	10.035	10.159	10.203	10.194	10.187	10.089
135	10.024	10.029	10.041	10.076	10.175	10.177	10.184	10.122
165	10.038	10.074	10.093	10.117	10.175	10.191	10.216	10.148
195	9.985	10.027	10.064	10.094	10.153	10.169	10.167	10.133
225	10.009	10.016	10.038	10.071	10.135	10.182	10.174	10.106
255	10.061	10.073	10.083	10.092	10.127	10.204	10.189	10.111
285	10.035	10.067	10.095	10.123	10.159	10.182	10.159	10.096
315	10.021	10.051	10.079	10.107	10.143	10.162	10.167	10.107
345	10.017	10.069	10.101	10.120	10.151	10.203	10.179	10.164
AVG	10.024	10.053	10.077	10.119	10.164	10.184	10.183	10.122

TABLE VI.—Concluded. TOTAL-PRESSURE DISTRIBUTION FOR INLET GUIDE VANES

[Pressures are in newtons per square centimeter.]

(y) Vane B in corner 2; IGV setting, 10°; airflow, 35.36 kg/sec; readings 21-30

IGV INLET RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 10	30	50	70	90
0	10.113	10.147	10.144	10.147	10.139
30	10.120	10.144	10.142	10.149	10.130
60	10.098	10.152	10.144	10.147	10.129
90	10.069	10.147	10.150	10.130	10.105
120	10.111	10.151	10.146	10.143	10.129
150	10.122	10.143	10.143	10.146	10.132
180	10.116	10.146	10.147	10.148	10.143
210	10.090	10.139	10.151	10.147	10.133
240	10.106	10.131	10.147	10.148	10.124
270	10.127	10.142	10.130	10.135	10.107
300	10.113	10.133	10.146	10.146	10.124
330	10.088	10.130	10.147	10.145	10.132
AVG	10.106	10.142	10.145	10.144	10.127

IGV EXIT RAKE

CIRCUM LOCATION DEG.	PERCENT SPAN FROM TIP 5	10	15	20	30	50	70	90
15	10.113	10.135	10.117	10.134	10.149	10.145	10.145	10.138
45	10.090	10.127	10.137	10.153	10.149	10.153	10.156	10.132
75	10.074	10.112	10.121	10.139	10.134	10.139	10.140	10.123
105	10.105	10.109	10.120	10.133	10.146	10.144	10.141	10.137
135	10.119	10.126	10.132	10.141	10.159	10.157	10.150	10.152
165	10.103	10.112	10.117	10.127	10.145	10.142	10.137	10.136
195	10.099	10.091	10.107	10.115	10.132	10.147	10.148	10.127
225	10.115	10.120	10.125	10.130	10.130	10.151	10.151	10.133
255	10.097	10.105	10.109	10.113	10.126	10.136	10.137	10.119
285	10.099	10.106	10.114	10.122	10.137	10.142	10.146	10.129
315	10.112	10.121	10.128	10.132	10.144	10.153	10.149	10.144
345	10.097	10.105	10.113	10.119	10.132	10.141	10.135	10.135
AVG	10.102	10.114	10.120	10.130	10.140	10.146	10.145	10.134

TABLE VII.—AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(a) Vane A in corner 2; IGV setting, −10°; airflow, 69.09 kg/sec; readings 281-290

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.644						
2		9.640						
3		9.636						
4		9.635						
5		9.635						
6		9.631						
7		9.634						
8		9.631						
9		9.627						
10		9.615						
34	9.677	9.649	9.632	9.651				
35		9.646						
36		9.653						
37	9.675	9.668	9.662	9.660				
38		9.680						
39		9.686						
40	9.704	9.699	9.698	9.700				
41	9.728	9.723	9.724	9.726				
42	9.750	9.751	9.749	9.751				
43	9.776	9.774	9.772	9.771				
44	9.793	9.796	9.793	9.797				
45	9.808	9.817	9.815	9.817				
46	9.832	9.832	9.831	9.836				
47	9.836	9.845	9.839	9.841				
48	9.858		9.≥58	9.893				
49	9.865		9.864	9.892				
50	9.853		9.856	9.904				
51	9.841		9.842	9.949				
52	9.825		9.842					
53				9.813				
54				0.000	9.440	10.101	9.436	9.769
55				0.000	9.441	10.214	9.426	9.795
56				*******	9.454	10.223	9.445	
57				9.689	*******	10.226	9.491	
58				9.710		10.223		9.712
59				9.718		10.226		*******
60				9.734	*******	10.221	*******	*******
61	9.736		9.732	9.733	9.723		9.713	
62	9.721		9.714	9.978	9.975		9.737	
63	9.716		9.713	9.714	9.919	9.769	9.915	9.738
64	9.710		9.709	9.708	9.863	9.775	9.862	9.736
65	9.704		9.704	9.706	9.824	9.766	9.821	9.732
66	9.699		9.698	9.703	9.781	9.756	9.781	9.726
67	9.690		9.691	9.697	9.741	9.746	9.743	9.717
68	9.690		9.686	9.691	9.703	9.732	9.703	9.709
69	9.682		9.678	9.686	9.715	9.714	9.665	9.696
70	9.672		9.672	9.677	9.635	9.698	9.632	9.681
71	9.664		9.660	9.673	9.604	9.676	9.599	9.660
72	9.661	*******	9.657	9.663	9.573	9.654	9.575	9.644
73	9.654	*******	9.648	9.656	9.550	9.631	9.549	9.624
74	9.652	*******	9.646	9.644	9.530	9.613	9.531	9.610
75	9.645	*******	9.651	9.650	9.517	9.601	9.517	9.595
76	9.591	*******	9.682	9.601	9.507	9.592	9.509	9.593
77	*******	*******	*******	*******	9.502	9.583	9.504	9.582
78	*******	*******	*******	*******	9.503	9.581	9.511	9.586
79	9.612	9.612	9.652	9.651	9.619	9.619	9.617	9.617

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(b) Vane A in corner 2; IGV setting, 0°; airflow, 82.30 kg/sec; readings 299-302

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.434						
2		9.428						
3		9.422						
4		9.425						
5		9.425						
6		9.415						
7		9.420						
8		9.414						
9		9.411						
10		9.393						
34	9.486	9.443	9.420	9.448				
35		9.437						
36		9.448						
37	9.482	9.469	9.462	9.460				
38		9.487						
39		9.496						
40	9.523	9.517	9.514	9.517				
41	9.559	9.553	9.552	9.555				
42	9.591	9.592	9.589	9.592				
43	9.629	9.626	9.622	9.627				
44	9.646	9.657	9.646	9.659				
45	9.674	9.689	9.686	9.687				
46	9.708	9.708	9.708	9.716				
47	9.717	9.730	9.719	9.723				
48	9.747		9.747	9.796				
49	9.756		9.755	9.795				
50	9.739		9.742	9.812				
51	9.723		9.725	9.878				
52	9.698		9.725					
53				9.686				
54				0.000	9.143	10.094	9.137	9.620
55				0.000	9.147	10.252	9.126	9.644
56				*******	9.165	10.264	9.153	
57				9.497	*******	10.266	9.221	
58				9.528		10.263		9.531
59				9.539		10.268		*******
60				9.564	*******	10.261	*******	*******
61	9.566		9.560	9.562	9.547		9.531	
62	9.545		9.535	9.914	9.906		9.568	
63	9.539		9.533	9.536	9.827	9.619	9.821	9.570
64	9.527		9.527	9.526	9.748	9.623	9.746	9.567
65	9.519		9.520	9.524	9.692	9.610	9.689	9.562
66	9.513		9.513	9.519	9.632	9.595	9.632	9.552
67	9.500		9.502	9.512	9.574	9.581	9.576	9.540
68	9.499		9.494	9.503	9.519	9.561	9.519	9.528
69	9.487		9.484	9.494	9.526	9.537	9.467	9.510
70	9.474		9.472	9.481	9.423	9.512	9.418	9.488
71	9.462		9.457	9.472	9.377	9.480	9.370	9.456
72	9.456	*******	9.451	9.460	9.331	9.447	9.334	9.432
73	9.447	*******	9.442	9.450	9.297	9.415	9.297	9.404
74	9.446	*******	9.438	9.433	9.268	9.387	9.270	9.382
75	9.435	*******	9.443	9.442	9.249	9.369	9.249	9.363
76	9.391	*******	9.552	9.367	9.234	9.357	9.236	9.365
77	*******	*******	*******	*******	9.227	9.345	9.228	9.341
78	*******	*******	*******	*******	9.228	9.342	9.238	9.346
79	9.389	9.389	9.442	9.440	9.397	9.397	9.393	9.393

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(c) Vane A in corner 2; IGV setting, 0°; airflow, 76.18 kg/sec; readings 295–298

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.526						
2		9.520						
3		9.514						
4		9.517						
5		9.517						
6		9.508						
7		9.512						
8		9.508						
9		9.505						
10		9.489						
34	9.569	9.532	9.510	9.535				
35		9.527						
36		9.537						
37	9.565	9.556	9.548	9.547				
38		9.570						
39		9.578						
40	9.601	9.596	9.594	9.595				
41	9.632	9.627	9.626	9.628				
42	9.659	9.660	9.658	9.659				
43	9.692	9.690	9.687	9.687				
44	9.712	9.716	9.712	9.718				
45	9.731	9.744	9.741	9.742				
46	9.758	9.758	9.760	9.766				
47	9.768	9.778	9.770	9.773				
48	9.795		9.795	9.838				
49	9.802		9.801	9.836				
50	9.788		9.788	9.851				
51	9.773		9.775	9.909				
52	9.753		9.775					
53				9.739				
54				0.000	9.272	10.097	9.263	9.684
55				0.000	9.274	10.236	9.255	9.710
56				*******	9.290	10.246	9.279	
57				9.580	*******	10.250	9.337	
58				9.607		10.246		9.610
59				9.617		10.250		*******
60				9.638	*******	10.241	*******	*******
61	9.640		9.635	9.636	9.624		9.609	
62	9.621		9.612	9.942	9.937		9.642	
63	9.616		9.610	9.613	9.866	9.683	9.861	9.642
64	9.607		9.606	9.605	9.798	9.689	9.796	9.639
65	9.599		9.600	9.603	9.748	9.678	9.746	9.635
66	9.594		9.593	9.599	9.697	9.665	9.697	9.627
67	9.582		9.584	9.593	9.646	9.653	9.647	9.616
68	9.582		9.577	9.584	9.600	9.635	9.599	9.607
69	9.571		9.571	9.577	9.610	9.613	9.553	9.591
70	9.560		9.560	9.565	9.515	9.592	9.511	9.572
71	9.549		9.548	9.559	9.475	9.564	9.469	9.541
72	9.545	*******	9.540	9.547	9.436	9.537	9.438	9.524
73	9.537	*******	9.532	9.539	9.407	9.508	9.407	9.499
74	9.535	*******	9.528	9.523	9.381	9.485	9.382	9.480
75	9.526	*******	9.533	9.532	9.365	9.468	9.364	9.463
76	9.467	*******	9.591	9.468	9.352	9.459	9.353	9.458
77	*******	*******	*******	*******	9.346	9.448	9.347	9.444
78	*******	*******	*******	*******	9.346	9.445	9.355	9.449
79	9.488	9.488	9.532	9.531	9.494	9.494	9.489	9.490

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(d) Vane A in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 279–289

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.639						
2		9.635						
3		9.631						
4		9.633						
5		9.633						
6		9.626						
7		9.629						
8		9.625						
9		9.623						
10		9.610						
34	9.673	9.645	9.627	9.648				
35		9.641						
36		9.649						
37	9.672	9.664	9.658	9.657				
38		9.675						
39		9.682						
40	9.697	9.697	9.694	9.696				
41	9.725	9.721	9.721	9.722				
42	9.746	9.748	9.746	9.747				
43	9.773	9.771	9.769	9.769				
44	9.790	9.793	9.790	9.794				
45	9.805	9.814	9.813	9.814				
46	9.828	9.828	9.828	9.834				
47	9.832	9.843	9.836	9.839				
48	9.856		9.856	9.891				
49	9.862		9.862	9.890				
50	9.850		9.852	9.901				
51	9.839		9.841	9.948				
52	9.823		9.841					
53				9.809				
54				0.000	9.434	10.102	9.429	9.765
55				0.000	9.435	10.215	9.419	9.793
56				*******	9.448	10.224	9.438	
57				9.685	*******	10.227	9.486	
58				9.706		10.224		9.709
59				9.715		10.226		*******
60				9.729	*******	10.222	*******	*******
61	9.732		9.729	9.730	9.720		9.709	
62	9.717		9.711	9.977	9.974		9.734	
63	9.712		9.709	9.711	9.917	9.766	9.913	9.734
64	9.706		9.705	9.704	9.860	9.772	9.859	9.732
65	9.699		9.700	9.703	9.820	9.763	9.818	9.729
66	9.695		9.694	9.699	9.778	9.753	9.779	9.722
67	9.686		9.687	9.694	9.737	9.743	9.740	9.713
68	9.686		9.681	9.684	9.699	9.728	9.699	9.706
69	9.677		9.678	9.682	9.712	9.711	9.662	9.692
70	9.668		9.668	9.673	9.631	9.694	9.626	9.677
71	9.660		9.658	9.668	9.599	9.672	9.595	9.656
72	9.656	*******	9.653	9.658	9.568	9.649	9.572	9.639
73	9.650	*******	9.643	9.652	9.544	9.627	9.544	9.619
74	9.648	*******	9.642	9.640	9.524	9.609	9.525	9.604
75	9.641	*******	9.646	9.645	9.510	9.596	9.510	9.589
76	9.587	*******	9.681	9.596	9.500	9.587	9.501	9.586
77	*******	*******	*******	*******	9.495	9.578	9.496	9.576
78	*******	*******	*******	*******	9.495	9.576	9.503	9.579
79	9.611	9.611	9.648	9.645	9.616	9.615	9.611	9.611

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(e) Vane A in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 291-294

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		10.013						
2		10.012						
3		10.012						
4		10.013						
5		10.013						
6		10.011						
7		10.011						
8		10.010						
9		10.010						
10		10.005						
34	10.022	10.014	10.010	10.014				
35		10.013						
36		10.015						
37	10.021	10.019	10.017	10.017				
38		10.021						
39		10.024						
40	10.027	10.026	10.026	10.026				
41	10.033	10.032	10.032	10.033				
42	10.039	10.039	10.038	10.039				
43	10.044	10.044	10.044	10.045				
44	10.049	10.049	10.049	10.050				
45	10.053	10.054	10.054	10.054				
46	10.058	10.058	10.058	10.059				
47	10.059	10.060	10.059	10.057				
48	10.065		10.065	10.072				
49	10.066		10.065	10.072				
50	10.063		10.064	10.075				
51	10.060		10.060	10.085				
52	10.056		10.060					
53				10.052				
54				0.000	9.966	10.120	9.962	10.042
55				0.000	9.965	10.152	9.960	10.054
56				*******	9.968	10.155	9.963	
57				10.025	*******	10.155	9.974	
58				10.030		10.154		10.030
59				10.031		10.153		*******
60				10.035	*******	10.154	*******	*******
61	10.035		10.034	10.035	10.033		10.030	
62	10.032		10.031	10.093	10.093		10.036	
63	10.031		10.030	10.030	10.080	10.042	10.079	10.037
64	10.030		10.029	10.029	10.067	10.045	10.067	10.037
65	10.028		10.028	10.028	10.057	10.043	10.057	10.035
66	10.026		10.027	10.027	10.046	10.040	10.047	10.033
67	10.024		10.025	10.026	10.036	10.037	10.040	10.031
68	10.024		10.024	10.025	10.027	10.034	10.028	10.029
69	10.022		10.023	10.023	10.037	10.030	10.019	10.027
70	10.020		10.021	10.022	10.012	10.027	10.012	10.024
71	10.018		10.019	10.021	10.004	10.022	10.002	10.017
72	10.017	*******	10.017	10.019	9.996	10.015	9.996	10.013
73	10.016	*******	10.015	10.017	9.990	10.009	9.990	10.008
74	10.015	*******	10.014	10.014	9.985	10.005	9.986	10.006
75	10.014	*******	10.015	10.015	9.983	10.005	9.983	10.002
76	9.999	*******	10.016	10.005	9.981	10.002	9.982	9.999
77	*******	*******	*******	*******	9.980	9.999	9.980	9.998
78	*******	*******	*******	*******	9.980	9.998	9.982	9.999
79	10.007	10.008	10.016	10.015	10.007	10.006	10.006	10.006

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(f) Vane A in corner 2; IGV setting, 10°; airflow, 68.41 kg/sec; readings 280–288

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.639						
2		9.634						
3		9.630						
4		9.630						
5		9.630						
6		9.626						
7		9.629						
8		9.625						
9		9.623						
10		9.610						
34	9.673	9.645	9.626	9.647				
35		9.640						
36		9.648						
37	9.672	9.663	9.657	9.656				
38		9.675						
39		9.681						
40	9.699	9.697	9.693	9.695				
41	9.724	9.721	9.720	9.722				
42	9.746	9.748	9.745	9.746				
43	9.772	9.770	9.769	9.768				
44	9.789	9.792	9.789	9.794				
45	9.805	9.814	9.812	9.813				
46	9.828	9.828	9.828	9.834				
47	9.835	9.842	9.836	9.838				
48	9.856		9.856	9.891				
49	9.862		9.861	9.890				
50	9.850		9.852	9.901				
51	9.839		9.840	9.947				
52	9.822		9.840					
53				9.809				
54				0.000	9.434	10.101	9.428	9.766
55				0.000	9.435	10.214	9.419	9.792
56				*******	9.448	10.223	9.438	
57				9.684	*******	10.226	9.486	
58				9.706		10.223		9.709
59				9.713		10.226		*******
60				9.730	*******	10.222	*******	*******
61	9.732		9.729	9.730	9.720		9.709	
62	9.717		9.710	9.977	9.973		9.734	
63	9.712		9.709	9.711	9.917	9.765	9.912	9.734
64	9.706		9.704	9.704	9.860	9.771	9.859	9.732
65	9.699		9.699	9.703	9.820	9.762	9.818	9.729
66	9.695		9.694	9.699	9.778	9.752	9.778	9.722
67	9.686		9.686	9.694	9.737	9.742	9.739	9.713
68	9.686		9.681	9.687	9.700	9.727	9.698	9.706
69	9.677		9.676	9.682	9.711	9.709	9.661	9.692
70	9.668		9.667	9.673	9.631	9.692	9.624	9.677
71	9.661		9.655	9.668	9.599	9.670	9.594	9.656
72	9.656	*******	9.652	9.659	9.568	9.647	9.569	9.640
73	9.651	*******	9.642	9.652	9.545	9.625	9.543	9.620
74	9.648	*******	9.641	9.640	9.525	9.606	9.524	9.605
75	9.643	*******	9.645	9.646	9.512	9.593	9.509	9.590
76	9.587	*******	9.679	9.597	9.502	9.584	9.500	9.587
77	*******	*******	*******	*******	9.497	9.576	9.495	9.576
78	*******	*******	*******	*******	9.498	9.573	9.502	9.580
79	9.609	9.609	9.648	9.645	9.613	9.612	9.612	9.612

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(g) Vane A2 in corner 2; IGV setting, 0°; airflow, 82.13 kg/sec; readings 307–310

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.421						
2		9.414						
3		9.408						
4		9.411						
5		9.411						
6		9.401						
7		9.406						
8		9.401						
9		9.397						
10		9.378						
34	9.472	9.430	9.405	9.435				
35		9.424						
36		9.434						
37	9.467	9.456	9.448	9.447				
38		9.471						
39		9.480						
40	9.509	9.500	9.500	9.504				
41	9.545	9.536	9.538	9.541				
42	9.577	9.572	9.574	9.579				
43	9.614	9.605	9.607	9.612				
44	9.638	9.633	9.638	9.648				
45	9.662	9.660	9.669	9.678				
46	9.698	9.698	9.693	9.708				
47	9.708	9.698	9.698	9.714				
48	9.740		9.740	9.793				
49	9.751		9.751	9.795				
50	9.741		9.745	9.814				
51	9.734		9.736	9.877				
52	9.715		9.736					
53				9.755				
54				0.000	9.248	10.071	9.244	9.684
55				0.000	9.243	10.231	9.224	9.700
56				*******	9.248	10.244	9.236	
57				9.632	*******	10.248	9.294	
58				9.634		10.245		9.617
59				9.628		10.226		*******
60				9.635	*******	10.242	*******	*******
61	9.603		9.606	9.616	9.616		9.611	
62	9.578		9.570	9.927	9.921		9.610	
63	9.569		9.565	9.580	9.842	9.637	9.837	9.608
64	9.556		9.557	9.567	9.769	9.629	9.767	9.601
65	9.544		9.548	9.562	9.712	9.612	9.712	9.592
66	9.536		9.537	9.555	9.652	9.592	9.655	9.581
67	9.521		9.524	9.544	9.593	9.576	9.598	9.567
68	9.520		9.515	9.533	9.537	9.556	9.539	9.553
69	9.505		9.505	9.522	9.537	9.530	9.484	9.533
70	9.490		9.490	9.507	9.436	9.506	9.433	9.510
71	9.476		9.475	9.497	9.390	9.474	9.383	9.477
72	9.470	*******	9.464	9.481	9.342	9.440	9.346	9.452
73	9.460	*******	9.453	9.469	9.304	9.407	9.308	9.422
74	9.457	*******	9.448	9.450	9.278	9.381	9.278	9.398
75	9.444	*******	9.453	9.459	9.258	9.362	9.256	9.378
76	9.395	*******	9.546	9.377	9.242	9.350	9.242	9.371
77	*******	*******	*******	*******	9.234	9.338	9.233	9.355
78	*******	*******	*******	*******	9.233	9.337	9.241	9.358
79	9.353	9.353	9.455	9.455	9.393	9.391	9.406	9.406

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(h) Vane A2 in corner 2; IGV setting, 0°; airflow, 76.09 kg/sec; readings 303-306

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.509						
2		9.503						
3		9.500						
4		9.502						
5		9.502						
6		9.493						
7		9.497						
8		9.492						
9		9.489						
10		9.472						
34	9.555	9.517	9.496	9.521				
35		9.512						
36		9.521						
37	9.549	9.540	9.532	9.533				
38		9.554						
39		9.561						
40	9.585	9.579	9.578	9.581				
41	9.617	9.609	9.610	9.608				
42	9.644	9.641	9.642	9.640				
43	9.677	9.669	9.671	9.678				
44	9.698	9.694	9.698	9.707				
45	9.719	9.716	9.726	9.733				
46	9.749	9.749	9.745	9.759				
47	9.760	9.749	9.751	9.767				
48	9.788		9.788	9.833				
49	9.796		9.796	9.835				
50	9.788		9.792	9.852				
51	9.782		9.785	9.907				
52	9.767		9.785					
53				9.800				
54				0.000	9.359	10.076	9.356	9.739
55				0.000	9.352	10.217	9.337	9.755
56				*******	9.356	10.229	9.348	
57				9.695	*******	10.232	9.398	
58				9.696		10.230		9.683
59				9.691		10.212		*******
60				9.696	*******	10.228	*******	*******
61	9.672		9.671	9.681	9.681		9.678	
62	9.644		9.640	9.953	9.946		9.675	
63	9.639		9.636	9.648	9.879	9.698	9.874	9.672
64	9.629		9.629	9.637	9.814	9.691	9.813	9.667
65	9.618		9.618	9.633	9.764	9.676	9.763	9.660
66	9.611		9.612	9.627	9.712	9.659	9.714	9.649
67	9.595		9.600	9.618	9.660	9.644	9.664	9.637
68	9.596		9.591	9.608	9.611	9.627	9.612	9.625
69	9.583		9.585	9.598	9.613	9.605	9.566	9.609
70	9.571		9.571	9.585	9.524	9.585	9.522	9.588
71	9.555		9.558	9.577	9.483	9.557	9.479	9.559
72	9.553	*******	9.549	9.563	9.441	9.527	9.445	9.538
73	9.545	*******	9.539	9.552	9.411	9.499	9.411	9.511
74	9.542	*******	9.535	9.536	9.386	9.475	9.386	9.491
75	9.531	*******	9.539	9.544	9.368	9.459	9.366	9.473
76	9.472	*******	9.600	9.475	9.354	9.450	9.355	9.468
77	*******	*******	*******	*******	9.347	9.440	9.347	9.454
78	*******	*******	*******	*******	9.347	9.437	9.354	9.456
79	9.452	9.452	9.542	9.541	9.486	9.484	9.498	9.497

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(i) Vane A2 in corner 2; IGV setting, 0°; airflow, 69.14 kg/sec; readings 311-314

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.629						
2		9.616						
3		9.619						
4		9.623						
5		9.623						
6		9.615						
7		9.619						
8		9.615						
9		9.613						
10		9.600						
34	9.665	9.633	9.616	9.639				
35		9.629						
36		9.637						
37	9.661	9.652	9.647	9.647				
38		9.663						
39		9.669						
40	9.689	9.684	9.684	9.685				
41	9.714	9.707	9.710	9.713				
42	9.737	9.734	9.734	9.738				
43	9.762	9.756	9.758	9.763				
44	9.780	9.776	9.780	9.786				
45	9.796	9.795	9.801	9.808				
46	9.820	9.820	9.818	9.828				
47	9.828	9.820	9.812	9.834				
48	9.851		9.851	9.889				
49	9.858		9.859	9.890				
50	9.852		9.854	9.903				
51	9.847		9.848	9.948				
52	9.834		9.848					
53				9.862				
54				0.000	9.504	10.086	9.504	9.812
55				0.000	9.500	10.202	9.488	9.829
56				*******	9.503	10.211	9.496	
57				9.778	*******	10.214	9.535	
58				9.780		10.211		9.768
59				9.775		10.195		*******
60				9.778	*******	10.210	*******	*******
61	9.758		9.759	9.766	9.765		9.763	
62	9.738		9.734	9.986	9.978		9.762	
63	9.732		9.729	9.740	9.926	9.778	9.923	9.759
64	9.725		9.724	9.731	9.873	9.774	9.872	9.755
65	9.715		9.718	9.725	9.833	9.761	9.833	9.748
66	9.710		9.710	9.723	9.790	9.747	9.793	9.741
67	9.700		9.701	9.716	9.749	9.736	9.754	9.731
68	9.698		9.695	9.707	9.710	9.723	9.712	9.722
69	9.688		9.688	9.700	9.715	9.705	9.673	9.708
70	9.677		9.677	9.690	9.639	9.689	9.637	9.691
71	9.668		9.667	9.683	9.607	9.665	9.602	9.669
72	9.664	*******	9.661	9.673	9.573	9.641	9.575	9.651
73	9.656	*******	9.653	9.663	9.549	9.619	9.549	9.630
74	9.654	*******	9.648	9.650	9.528	9.600	9.529	9.614
75	9.646	*******	9.651	9.656	9.514	9.588	9.512	9.598
76	9.596	*******	9.687	9.601	9.503	9.579	9.503	9.595
77	*******	*******	*******	*******	9.497	9.572	9.496	9.584
78	*******	*******	*******	*******	9.497	9.570	9.503	9.585
79	9.583	9.583	9.655	9.654	9.609	9.608	9.619	9.616

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(j) Vane A2 in corner 2; IGV setting, 0°; airflow, 35.45 kg/sec; readings 315–318

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		10.012						
2		10.010						
3		10.010						
4		10.010						
5		10.010						
6		10.008						
7		10.010						
8		10.008						
9		10.007						
10		10.004						
34	10.020	10.011	10.008	10.012				
35		10.011						
36		10.013						
37	10.018	10.016	10.015	10.015				
38		10.019						
39		10.021						
40	10.025	10.024	10.024	10.025				
41	10.031	10.029	10.030	10.028				
42	10.037	10.035	10.035	10.037				
43	10.042	10.040	10.041	10.043				
44	10.047	10.045	10.047	10.048				
45	10.051	10.047	10.052	10.054				
46	10.056	10.056	10.055	10.058				
47	10.057	10.056	10.056	10.059				
48	10.064		10.064	10.072				
49	10.065		10.065	10.072				
50	10.064		10.064	10.076				
51	10.062		10.062	10.085				
52	10.059		10.062					
53				10.066				
54				0.000	9.983	10.116	9.982	10.053
55				0.000	9.980	10.150	9.977	10.062
56				*******	9.980	10.153	9.978	
57				10.047	*******	10.152	9.987	
58				10.047		10.151		10.045
59				10.046		10.147		*******
60				10.046	*******	10.151	*******	*******
61	10.041		10.041	10.043	10.043		10.043	
62	10.036		10.036	10.096	10.095		10.043	
63	10.035		10.034	10.037	10.082	10.045	10.082	10.041
64	10.033		10.033	10.035	10.070	10.045	10.070	10.041
65	10.032		10.033	10.035	10.061	10.042	10.061	10.040
66	10.030		10.030	10.033	10.050	10.040	10.051	10.038
67	10.028		10.029	10.031	10.040	10.036	10.043	10.035
68	10.027		10.027	10.030	10.030	10.032	10.030	10.032
69	10.022		10.025	10.028	10.036	10.028	10.020	10.029
70	10.019		10.023	10.026	10.012	10.025	10.013	10.026
71	10.020		10.020	10.025	10.005	10.020	10.005	10.021
72	10.019	*******	10.019	10.022	9.998	10.014	9.999	10.017
73	10.018	*******	10.017	10.020	9.992	10.008	9.989	10.011
74	10.016	*******	10.016	10.017	9.986	10.003	9.987	10.007
75	10.015	*******	10.016	10.017	9.983	10.002	9.982	10.003
76	10.001	*******	10.018	10.006	9.980	9.999	9.982	10.004
77	*******	*******	*******	*******	9.980	9.997	9.981	10.001
78	*******	*******	*******	*******	9.980	9.998	9.982	10.002
79	10.002	10.001	10.018	10.018	10.007	10.006	10.008	10.008

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(k) Vane A3 in corner 2; IGV setting, 0°; airflow, 76.16 kg/sec; readings 327–330

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.542						
2		9.534						
3		9.528						
4		9.528						
5		9.528						
6		9.522						
7		9.526						
8		9.522						
9		9.518						
10		9.497						
34	9.568	9.548	9.540	9.550				
35		9.550						
36		9.556						
37	9.573	9.572	9.566	9.559				
38		9.585						
39		9.593						
40	9.610	9.610	9.608	9.607				
41	9.642	9.639	9.639	9.638				
42	9.670	9.671	9.670	9.670				
43	9.701	9.700	9.697	9.700				
44	9.722	9.727	9.722	9.727				
45	9.740	9.753	9.750	9.903				
46	9.770	9.770	9.769	9.775				
47	9.776	9.788	9.780	9.782				
48	9.802		9.802	9.845				
49	9.810		9.809	9.843				
50	9.795		9.797	9.857				
51	9.783		9.782	9.915				
52	9.762		9.782					
53				9.703				
54				0.000	9.271	10.100	9.256	9.666
55				0.000	9.276	10.237	9.251	9.697
56				*******	9.298	10.246	9.281	
57				9.590	*******	10.246	9.353	
58				9.616		10.245		9.620
59				9.627		10.250		*******
60				9.649	*******	10.242	*******	*******
61	9.646		9.647	9.640	9.634		9.620	
62	9.629		9.624	9.972	9.941		9.651	
63	9.623		9.622	9.626	9.879	9.691	9.872	9.651
64	9.615		9.617	9.615	9.808	9.696	9.804	9.649
65	9.606		9.611	9.614	9.758	9.686	9.756	9.645
66	9.603		9.604	9.611	9.706	9.674	9.707	9.636
67	9.591		9.595	9.604	9.655	9.662	9.654	9.625
68	9.591		9.588	9.595	9.607	9.643	9.608	9.615
69	9.580		9.579	9.589	9.607	9.621	9.563	9.599
70	9.569		9.570	9.576	9.524	9.601	9.522	9.582
71	9.558		9.559	9.571	9.486	9.574	9.482	9.555
72	9.555	*******	9.551	9.558	9.446	9.547	9.451	9.534
73	9.548	*******	9.544	9.549	9.417	9.519	9.419	9.510
74	9.547	*******	9.541	9.533	9.392	9.496	9.395	9.491
75	9.537	*******	9.545	9.546	9.377	9.478	9.378	9.474
76	9.501	*******	9.607	9.467	9.364	9.470	9.368	9.471
77	*******	*******	*******	*******	9.358	9.461	9.361	9.456
78	*******	*******	*******	*******	9.359	9.458	9.369	9.462
79	9.499	9.497	9.556	9.557	9.505	9.505	9.501	9.501

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(l) Vane A3 in corner 2; IGV setting, 0°; airflow, 69.19 kg/sec; readings 323–326

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.650						
2		9.644						
3		9.640						
4		9.642						
5		9.642						
6		9.635						
7		9.638						
8		9.634						
9		9.631						
10		9.613						
34	9.671	9.655	9.648	9.655				
35		9.656						
36		9.662						
37	9.675	9.676	9.670	9.664				
38		9.686						
39		9.692						
40	9.706	9.705	9.704	9.703				
41	9.731	9.729	9.729	9.729				
42	9.754	9.755	9.751	9.754				
43	9.776	9.778	9.776	9.778				
44	9.796	9.800	9.796	9.800				
45	9.811	9.821	9.818	9.820				
46	9.834	9.834	9.834	9.839				
47	9.839	9.849	9.842	9.843				
48	9.861		9 861	9.896				
49	9.867		9.866	9.894				
50	9.855		9.857	9.905				
51	9.845		9.844	9.952				
52	9.825		9.844					
53				9.780				
54				0.000	9.428	10.105	9.418	9.750
55				0.000	9.433	10.218	9.412	9.785
56				*******	9.450	10.224	9.436	
57				9.693	*******	10.226	9.495	
58				9.711		10.224		9.715
59				9.720		10.226		*******
60				9.738	*******	10.221	*******	*******
61	9.735		9.735	9.736	9.726		9.716	
62	9.722		9.718	10.000	9.976		9.740	
63	9.717		9.717	9.720	9.926	9.770	9.920	9.740
64	9.711		9.712	9.711	9.868	9.773	9.866	9.739
65	9.704		9.707	9.710	9.827	9.768	9.825	9.735
66	9.700		9.702	9.708	9.784	9.758	9.785	9.728
67	9.691		9.695	9.702	9.743	9.748	9.747	9.720
68	9.692		9.689	9.695	9.705	9.732	9.706	9.711
69	9.683		9.685	9.690	9.711	9.716	9.669	9.699
70	9.674		9.676	9.680	9.636	9.700	9.635	9.684
71	9.666		9.666	9.676	9.605	9.678	9.603	9.662
72	9.663	*******	9.660	9.666	9.574	9.655	9.577	9.646
73	9.656	*******	9.654	9.658	9.550	9.633	9.551	9.626
74	9.654	*******	9.650	9.643	9.531	9.615	9.533	9.611
75	9.648	*******	9.654	9.656	9.518	9.603	9.518	9.597
76	9.595	*******	9.681	9.592	9.508	9.591	9.509	9.594
77	*******	*******	*******	*******	9.502	9.585	9.505	9.583
78	*******	*******	*******	*******	9.504	9.584	9.512	9.587
79	9.617	9.616	9.665	9.661	9.622	9.621	9.618	9.619

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(m) Vane A3 in corner 2; IGV setting, 0°; airflow, 35.51 kg/sec; readings 319–322

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		10.016						
2		10.014						
3		10.014						
4		10.014						
5		10.014						
6		10.009						
7		10.013						
8		10.012						
9		10.011						
10		10.007						
34	10.021	10.016	10.015	10.016				
35		10.017						
36		10.018						
37	10.022	10.021	10.021	10.019				
38		10.023						
39		10.025						
40	10.028	10.028	10.029	10.028				
41	10.034	10.034	10.034	10.034				
42	10.040	10.040	10.040	10.040				
43	10.046	10.046	10.045	10.046				
44	10.050	10.051	10.050	10.051				
45	10.053	10.056	10.055	10.055				
46	10.059	10.059	10.059	10.060				
47	10.059	10.062	10.060	10.061				
48	10.066		10.066	10.073				
49	10.064		10.066	10.073				
50	10.064		10.061	10.075				
51	10.061		10.061	10.083				
52	10.057		10.061					
53				10.046				
54				0.000	9.962	10.121	9.959	10.038
55				0.000	9.963	10.153	9.957	10.052
56				*******	9.966	10.156	9.962	
57				10.028	*******	10.155	9.976	
58				10.031		10.154		10.032
59				10.033		10.154		*******
60				10.036	*******	10.155	*******	*******
61	10.036		10.036	10.036	10.034		10.032	
62	10.033		10.033	10.098	10.094		10.037	
63	10.031		10.032	10.032	10.083	10.043	10.081	10.037
64	10.030		10.031	10.031	10.068	10.046	10.068	10.037
65	10.029		10.029	10.031	10.058	10.044	10.058	10.036
66	10.028		10.028	10.029	10.048	10.042	10.048	10.034
67	10.026		10.026	10.028	10.038	10.039	10.044	10.032
68	10.025		10.026	10.027	10.028	10.035	10.029	10.030
69	10.023		10.024	10.025	10.035	10.030	10.020	10.027
70	10.022		10.023	10.023	10.012	10.027	10.013	10.024
71	10.020		10.021	10.023	10.005	10.023	10.004	10.019
72	10.019	*******	10.018	10.020	9.998	10.017	9.999	10.015
73	10.017	*******	10.017	10.018	9.992	10.011	9.992	10.010
74	10.016	*******	10.015	10.015	9.987	10.007	9.988	10.007
75	10.015	*******	10.016	10.017	9.984	10.008	9.984	10.003
76	10.000	*******	10.016	10.004	9.982	10.003	9.983	10.003
77	*******	*******	*******	*******	9.981	10.001	9.982	10.000
78	*******	*******	*******	*******	9.931	10.000	9.984	10.001
79	10.008	10.008	10.020	10.019	10.009	10.008	10.008	10.007

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(n) Vane A4 in corner 2; IGV setting, 0°; airflow, 76.29 kg/sec; readings 331–334

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.524						
2		9.515						
3		9.510						
4		9.512						
5		9.512						
6		9.504						
7		9.508						
8		9.507						
9		9.499						
10		9.480						
34	9.548	9.528	9.520	9.531				
35		9.530						
36		9.537						
37	9.555	9.553	9.548	9.541				
38		9.565						
39		9.573						
40	9.592	9.590	9.586	9.589				
41	9.625	9.619	9.621	9.622				
42	9.651	9.649	9.651	9.653				
43	9.684	9.674	9.676	9.684				
44	9.705	9.699	9.705	9.712				
45	9.725	9.726	9.731	9.896				
46	9.754	9.754	9.751	9.763				
47	9.764	9.758	9.757	9.771				
48	9.790		9.790	9.837				
49	9.800		9.799	9.839				
50	9.791		9.793	9.854				
51	9.784		9.784	9.909				
52	9.770		9.784					
53				9.784				
54				0.000	9.354	10.078	9,349	9.729
55				0.000	9.351	10.219	9.334	9.749
56				*******	9.362	10.230	9.350	
57				9.712	*******	10.231	9.404	
58				9.707		10.227		9.691
59				9.700		10.209		*******
60				9.706	*******	10.224	*******	*******
61	9.672		9.678	9.687	9.687		9.685	
62	9.649		9.647	9.952	9.948		9.681	
63	9.642		9.642	9.659	9.880	9.704	9.876	9.678
64	9.633		9.637	9.646	9.817	9.701	9.817	9.673
65	9.622		9.628	9.640	9.769	9.685	9.770	9.666
66	9.615		9.619	9.636	9.717	9.668	9.721	9.655
67	9.603		9.608	9.628	9.665	9.651	9.669	9.643
68	9.602		9.600	9.617	9.617	9.633	9.620	9.631
69	9.589		9.592	9.608	9.610	9.612	9.573	9.614
70	9.577		9.579	9.594	9.531	9.591	9.531	9.595
71	9.565		9.566	9.586	9.492	9.565	9.488	9.568
72	9.560	*******	9.557	9.573	9.451	9.536	9.456	9.546
73	9.552	*******	9.548	9.561	9.421	9.502	9.423	9.520
74	9.549	*******	9.543	9.543	9.396	9.485	9.397	9.500
75	9.538	*******	9.547	9.555	9.379	9.467	9.379	9.482
76	9.517	*******	9.609	9.476	9.364	9.459	9.367	9.478
77	*******	*******	*******	*******	9.358	9.449	9.356	9.462
78	*******	*******	*******	*******	9.357	9.447	9.367	9.465
79	9.467	9.467	9.558	9.558	9.494	9.493	9.507	9.507

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(o) Vane A4 in corner 2; IGV setting, 0°; airflow, 69.31 kg/sec; readings 335–338

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.633						
2		9.627						
3		9.623						
4		9.626						
5		9.626						
6		9.618						
7		9.622						
8		9.618						
9		9.614						
10		9.598						
34	9.652	9.637	9.630	9.638				
35		9.639						
36		9.644						
37	9.659	9.658	9.654	9.648				
38		9.668						
39		9.674						
40	9.689	9.688	9.687	9.687				
41	9.716	9.711	9.713	9.714				
42	9.735	9.736	9.737	9.740				
43	9.764	9.759	9.760	9.764				
44	9.781	9.779	9.781	9.787				
45	9.797	9.798	9.802	9.808				
46	9.821	9.821	9.819	9.829				
47	9.828	9.823	9.822	9.834				
48	9.851		9.851	9.888				
49	9.859		9.858	9.890				
50	9.851		9.853	9.903				
51	9.845		9.844	9.947				
52	9.834		9.844					
53				9.846				
54				0.000	9.496	10.085	9.491	9.799
55				0.000	9.492	10.203	9.476	9.827
56				*******	9.501	10.212	9.487	
57				9.790	*******	10.213	9.534	
58				9.784		10.210		9.771
59				9.778		10.197		*******
60				9.783	*******	10.208	*******	*******
61	9.754		9.759	9.767	9.768		9.766	
62	9.736		9.735	9.985	9.981		9.763	
63	9.730		9.731	9.742	9.925	9.780	9.922	9.760
64	9.722		9.725	9.734	9.874	9.778	9.874	9.755
65	9.714		9.719	9.732	9.834	9.765	9.834	9.750
66	9.709		9.711	9.727	9.791	9.751	9.795	9.741
67	9.699		9.704	9.719	9.747	9.739	9.754	9.732
68	9.698		9.697	9.711	9.711	9.724	9.713	9.722
69	9.688		9.690	9.704	9.706	9.706	9.675	9.708
70	9.678		9.680	9.692	9.639	9.689	9.639	9.692
71	9.668		9.669	9.686	9.607	9.666	9.605	9.670
72	9.665	*******	9.662	9.675	9.575	9.643	9.578	9.653
73	9.657	*******	9.654	9.666	9.550	9.621	9.552	9.631
74	9.654	*******	9.649	9.650	9.530	9.602	9.531	9.615
75	9.646	*******	9.653	9.660	9.516	9.589	9.516	9.601
76	9.618	*******	9.686	9.594	9.505	9.582	9.506	9.597
77	*******	*******	*******	*******	9.499	9.574	9.500	9.584
78	*******	*******	*******	*******	9.499	9.573	9.506	9.587
79	9.589	9.588	9.662	9.663	9.611	9.610	9.621	9.621

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(p) Vane A4 in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 339-342

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		10.013						
2		10.012						
3		10.012						
4		10.012						
5		10.012						
6		10.010						
7		10.011						
8		10.010						
9		10.009						
10		10.004						
34	10.019	10.014	10.013	10.013				
35		10.009						
36		10.016						
37	10.019	10.019	10.018	10.016				
38		10.021						
39		10.023						
40	10.026	10.025	10.026	10.026				
41	10.032	10.031	10.032	10.032				
42	10.038	10.037	10.038	10.039				
43	10.044	10.042	10.043	10.044				
44	10.048	10.047	10.048	10.050				
45	10.052	10.052	10.052	10.055				
46	10.057	10.057	10.057	10.059				
47	10.058	10.058	10.057	10.060				
48	10.065		10.065	10.072				
49	10.066		10.066	10.073				
50	10.064		10.065	10.076				
51	10.062		10.062	10.086				
52	10.059		10.062					
53				10.063				
54				0.000	9.981	10.117	9.980	10.052
55				0.000	9.979	10.150	9.977	10.062
56				*******	9.981	10.153	9.977	
57				10.051	*******	10.153	9.987	
58				10.049		10.151		10.046
59				10.045		10.147		*******
60				10.048	*******	10.151	*******	*******
61	10.041		10.043	10.044	10.045		10.044	
62	10.034		10.037	10.096	10.096		10.043	
63	10.036		10.036	10.039	10.083	10.047	10.083	10.042
64	10.034		10.035	10.037	10.071	10.047	10.072	10.043
65	10.032		10.034	10.037	10.062	10.044	10.062	10.041
66	10.030		10.031	10.035	10.051	10.041	10.051	10.038
67	10.028		10.030	10.033	10.040	10.037	10.038	10.035
68	10.028		10.029	10.032	10.029	10.033	10.030	10.030
69	10.026		10.027	10.029	10.034	10.029	10.023	10.031
70	10.023		10.025	10.028	10.011	10.027	10.016	10.028
71	10.021		10.022	10.026	10.007	10.022	10.008	10.022
72	10.021	*******	10.021	10.024	10.000	10.016	10.001	10.017
73	10.019	*******	10.019	10.021	9.993	10.010	9.993	10.012
74	10.018	*******	10.017	10.018	9.987	10.005	9.989	10.009
75	10.016	*******	10.018	10.019	9.984	10.000	9.986	10.004
76	10.003	*******	10.019	10.007	9.979	10.002	9.985	10.006
77	*******	*******	*******	*******	9.982	10.000	9.984	10.002
78	*******	*******	*******	*******	9.981	9.999	9.985	10.003
79	10.003	10.003	10.018	10.021	10.008	10.006	10.009	10.009

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(q) Vane B in corner 2; IGV setting, −10°; airflow, 68.98 kg/sec; readings 9–19

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.623						
2		9.618						
3		9.614						
4		9.617						
5		9.617						
6		9.611						
7		9.614						
8		9.610						
9		9.607						
10		9.593						
34	9.648	9.628	9.619	9.632				
35		9.627						
36		9.633						
37	9.646	9.642	9.643	9.639				
38		9.654						
39		9.660						
40	9.675	9.672	9.672	9.674				
41	9.698	9.693	9.695	9.698				
42	9.719	9.715	9.718	9.721				
43	9.742	9.735	9.739	9.745				
44	9.757	9.753	9.759	9.766				
45	9.774	9.769	9.777	9.785				
46	9.796	9.781	9.792	9.805				
47	9.803	9.790	9.795	9.809				
48	9.834		9.834	9.858				
49	9.830		9.828	9.862				
50	9.822		9.821	9.876				
51	9.816		9.818	9.913				
52	9.806		9.818					
53				9.887				
54				0.000	9.573	10.019	9.578	9.835
55				0.000	9.567	10.142	9.560	9.842
56				*******	9.566	10.149	9.560	
57				9.789	*******	10.149	9.582	
58				9.781		10.147		9.790
59				9.772		10.128		*******
60				9.770	*******	10.146	*******	*******
61	9.732		9.736	9.751	9.761		9.768	
62	9.715		9.718	9.941	9.952		9.745	
63	9.710		9.714	9.727	9.885	9.678	9.889	9.743
64	9.705		9.708	9.719	9.832	9.718	9.835	9.738
65	9.698		9.703	9.715	9.792	9.715	9.793	9.732
66	9.692		9.696	9.710	9.754	9.711	9.755	9.724
67	9.684		9.689	9.703	9.721	9.707	9.721	9.714
68	9.682		9.683	9.695	9.686	9.700	9.686	9.705
69	9.674		9.677	9.689	9.696	9.687	9.656	9.693
70	9.665		9.667	9.679	9.629	9.676	9.628	9.679
71	9.657		9.660	9.670	9.602	9.658	9.599	9.658
72	9.652	*******	9.649	9.663	9.574	9.638	9.577	9.642
73	9.647	*******	9.645	9.655	9.554	9.618	9.555	9.624
74	9.643	*******	9.639	9.644	9.536	9.602	9.538	9.609
75	9.637	*******	9.642	9.649	9.524	9.592	9.525	9.595
76	9.593	*******	9.665	9.599	9.515	9.585	9.517	9.591
77	*******	*******	*******	*******	9.510	9.578	9.512	9.582
78	*******	*******	*******	*******	9.509	9.577	9.517	9.583
79	9.593	9.593	9.651	9.651	9.610	9.610	9.614	9.615

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(r) Vane B in corner 2; IGV setting, −10°; airflow, 35.35 kg/sec; readings 20–31

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		10.014						
2		10.013						
3		10.012						
4		10.013						
5		10.013						
6		10.011						
7		10.012						
8		10.011						
9		10.010						
10		10.006						
34	10.021	10.015	10.013	10.016				
35		10.016						
36		10.017						
37	10.020	10.020	10.019	10.018				
38		10.022						
39		10.023						
40	10.027	10.027	10.027	10.028				
41	10.034	10.031	10.033	10.034				
42	10.039	10.038	10.039	10.040				
43	10.044	10.043	10.044	10.046				
44	10.050	10.048	10.049	10.051				
45	10.054	10.052	10.054	10.056				
46	10.059	10.055	10.058	10.060				
47	10.060	10.057	10.058	10.062				
48	10.068		10.068	10.075				
49	10.067		10.067	10.075				
50	10.066		10.063	10.079				
51	10.064		10.064	10.089				
52	10.060		10.064					
53				10.079				
54				0.000	9.999	10.116	10.000	10.066
55				0.000	9.997	10.151	9.995	10.072
56				*******	9.996	10.154	9.994	
57				10.055	*******	10.152	10.000	
58				10.053		10.152		10.056
59				10.048		10.158		*******
60				10.050	*******	10.151	*******	*******
61	10.042		10.043	10.047	10.049		10.051	
62	10.038		10.038	10.100	10.102		10.045	
63	10.037		10.037	10.037	10.083	10.022	10.084	10.044
64	10.035		10.036	10.038	10.070	10.037	10.070	10.043
65	10.033		10.035	10.038	10.059	10.038	10.059	10.042
66	10.032		10.033	10.036	10.049	10.037	10.049	10.039
67	10.030		10.031	10.034	10.037	10.035	10.037	10.036
68	10.029		10.030	10.032	10.030	10.033	10.031	10.034
69	10.027		10.029	10.030	10.057	10.030	10.023	10.031
70	10.025		10.023	10.028	10.016	10.028	10.016	10.028
71	10.023		10.023	10.027	10.009	10.024	10.008	10.022
72	10.022	*******	10.022	10.025	10.001	10.018	10.001	10.018
73	10.020	*******	10.017	10.022	9.996	10.012	9.995	10.014
74	10.019	*******	10.018	10.020	9.991	10.009	9.992	10.010
75	10.018	*******	10.019	10.021	9.988	10.005	9.988	10.005
76	10.004	*******	10.019	10.009	9.986	10.006	9.987	10.006
77	*******	*******	*******	*******	9.985	10.004	9.985	10.003
78	*******	*******	*******	*******	9.935	10.003	9.987	10.003
79	10.008	10.008	10.022	10.022	10.012	10.011	10.010	10.010

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(s) Vane B in corner 2; IGV setting, 0°; airflow, 76.17 kg/sec; readings 41–44

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.513						
2		9.508						
3		9.502						
4		9.505						
5		9.505						
6		9.496						
7		9.501						
8		9.496						
9		9.493						
10		9.473						
34	9.549	9.525	9.513	9.531				
35		9.523						
36		9.531						
37	9.550	9.546	9.541	9.537				
38		9.558						
39		9.567						
40	9.587	9.584	9.585	9.586				
41	9.619	9.612	9.616	9.619				
42	9.648	9.645	9.647	9.651				
43	9.680	9.671	9.676	9.682				
44	9.702	9.694	9.703	9.711				
45	9.723	9.717	9.729	9.739				
46	9.755	9.731	9.749	9.767				
47	9.768	9.748	9.754	9.775				
48	9.807		9.807	9.840				
49	9.802		9.800	9.846				
50	9.792		9.794	9.864				
51	9.786		9.791	9.916				
52	9.771		9.791					
53				9.883				
54				0.000	9.458	10.059	9.461	9.813
55				0.000	9.451	10.221	9.438	9.814
56				*******	9.452	10.231	9.439	
57				9.749	*******	10.235	9.472	
58				9.739		10.229		9.750
59				9.725		10.193		*******
60				9.723	*******	10.226	*******	*******
61	9.670		9.677	9.700	9.710		9.722	
62	9.645		9.650	9.959	9.968		9.688	
63	9.639		9.644	9.663	9.877	9.592	9.883	9.684
64	9.630		9.639	9.650	9.805	9.647	9.807	9.676
65	9.621		9.628	9.646	9.750	9.647	9.752	9.669
66	9.614		9.620	9.639	9.697	9.642	9.701	9.658
67	9.601		9.609	9.629	9.650	9.635	9.650	9.645
68	9.598		9.599	9.617	9.604	9.625	9.606	9.632
69	9.586		9.592	9.608	9.625	9.605	9.564	9.615
70	9.574		9.578	9.594	9.526	9.588	9.525	9.594
71	9.563		9.566	9.585	9.488	9.564	9.486	9.567
72	9.557	*******	9.557	9.571	9.450	9.537	9.456	9.545
73	9.549	*******	9.547	9.563	9.423	9.510	9.425	9.520
74	9.547	*******	9.544	9.546	9.399	9.488	9.402	9.499
75	9.537	*******	9.546	9.554	9.384	9.471	9.384	9.481
76	9.493	*******	9.616	9.483	9.369	9.463	9.372	9.475
77	*******	*******	*******	*******	9.362	9.455	9.366	9.461
78	*******	*******	*******	*******	9.361	9.453	9.372	9.464
79	9.477	9.477	9.554	9.553	9.499	9.498	9.509	9.509

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(t) Vane B in corner 2; IGV setting, 0°; airflow, 73.99 kg/sec; readings 36–40

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.541						
2		9.535						
3		9.529						
4		9.533						
5		9.533						
6		9.524						
7		9.529						
8		9.524						
9		9.520						
10		9.501						
34	9.570	9.546	9.535	9.552				
35		9.547						
36		9.553						
37	9.574	9.571	9.567	9.563				
38		9.583						
39		9.591						
40	9.798	9.604	9.608	9.610				
41	9.641	9.635	9.638	9.641				
42	9.668	9.665	9.667	9.672				
43	9.699	9.691	9.695	9.702				
44	9.720	9.713	9.721	9.730				
45	9.740	9.733	9.746	9.756				
46	9.769	9.750	9.765	9.781				
47	9.779	9.762	9.768	9.787				
48	9.820		9.820	9.851				
49	9.816		9.813	9.856				
50	9.805		9.807	9.875				
51	9.797		9.800	9.923				
52	9.784		9.800					
53				9.892				
54				0.000	9.483	10.062	9.484	9.824
55				0.000	9.476	10.217	9.465	9.827
56				*******	9.474	10.227	9.465	
57				9.762	*******	10.231	9.495	
58				9.753		10.224		9.763
59				9.740		10.192		*******
60				9.738	*******	10.225	*******	*******
61	9.686		9.692	9.716	9.725		9.735	
62	9.664		9.669	9.963	9.973		9.705	
63	9.658		9.664	9.681	9.886	9.614	9.892	9.701
64	9.650		9.657	9.670	9.816	9.667	9.821	9.694
65	9.641		9.649	9.665	9.764	9.666	9.766	9.687
66	9.634		9.640	9.658	9.714	9.660	9.717	9.676
67	9.622		9.630	9.649	9.674	9.654	9.674	9.664
68	9.620		9.622	9.638	9.625	9.645	9.627	9.652
69	9.609		9.614	9.629	9.649	9.627	9.587	9.635
70	9.597		9.601	9.616	9.550	9.611	9.549	9.616
71	9.587		9.590	9.609	9.515	9.587	9.513	9.590
72	9.581	*******	9.581	9.596	9.479	9.562	9.484	9.569
73	9.569	*******	9.572	9.585	9.451	9.536	9.454	9.544
74	9.567	*******	9.564	9.568	9.428	9.514	9.432	9.525
75	9.559	*******	9.567	9.576	9.413	9.503	9.415	9.507
76	9.511	*******	9.612	9.508	9.400	9.491	9.403	9.501
77	*******	*******	*******	*******	9.393	9.483	9.396	9.487
78	*******	*******	*******	*******	9.392	9.481	9.403	9.490
79	9.502	9.504	9.576	9.576	9.524	9.524	9.533	9.533

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(u) Vane B in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 8–18

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.624						
2		9.619						
3		9.616						
4		9.618						
5		9.618						
6		9.612						
7		9.615						
8		9.611						
9		9.609						
10		9.594						
34	9.650	9.630	9.621	9.634				
35		9.629						
36		9.633						
37	9.649	9.646	9.644	9.640				
38		9.655						
39		9.660						
40	9.676	9.673	9.674	9.675				
41	9.699	9.694	9.697	9.699				
42	9.720	9.716	9.719	9.722				
43	9.743	9.736	9.739	9.745				
44	9.758	9.754	9.760	9.766				
45	9.774	9.769	9.778	9.786				
46	9.796	9.782	9.793	9.806				
47	9.805	9.791	9.795	9.810				
48	9.834		9 834	9.859				
49	9.831		9.829	9.863				
50	9.823		9.822	9.876				
51	9.819		9.817	9.914				
52	9.807		9.817					
53				9.886				
54				0.000	9.575	10.020	9.576	9.835
55				0.000	9.569	10.142	9.561	9.843
56				*******	9.569	10.147	9.561	
57				9.790	*******	10.148	9.583	
58				9.780		10.146		9.792
59				9.773		10.126		*******
60				9.768	*******	10.145	*******	*******
61	9.734		9.738	9.756	9.762		9.769	
62	9.717		9.719	9.942	9.953		9.747	
63	9.712		9.716	9.728	9.886	9.679	9.890	9.743
64	9.706		9.710	9.721	9.833	9.719	9.836	9.739
65	9.699		9.705	9.717	9.794	9.717	9.794	9.734
66	9.694		9.698	9.711	9.755	9.712	9.757	9.726
67	9.686		9.691	9.704	9.724	9.708	9.724	9.716
68	9.684		9.684	9.697	9.684	9.701	9.688	9.707
69	9.676		9.679	9.690	9.698	9.689	9.658	9.694
70	9.667		9.669	9.680	9.630	9.676	9.629	9.680
71	9.659		9.661	9.675	9.603	9.659	9.601	9.659
72	9.655	*******	9.654	9.665	9.576	9.639	9.580	9.643
73	9.648	*******	9.647	9.657	9.555	9.620	9.558	9.625
74	9.645	*******	9.642	9.645	9.538	9.604	9.541	9.611
75	9.639	*******	9.645	9.648	9.526	9.595	9.528	9.597
76	9.596	*******	9.669	9.601	9.517	9.583	9.520	9.593
77	*******	*******	*******	*******	9.512	9.580	9.515	9.584
78	*******	*******	*******	*******	9.512	9.579	9.519	9.585
79	9.598	9.598	9.651	9.651	9.613	9.612	9.618	9.618

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(v) Vane B in corner 2; IGV setting, 0°; airflow, 56.55 kg/sec; readings 32–35

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.823						
2		9.818						
3		9.819						
4		9.820						
5		9.820						
6		9.816						
7		9.818						
8		9.815						
9		9.813						
10		9.803						
34	9.840	9.826	9.821	9.828				
35		9.827						
36		9.830						
37	9.841	9.839	9.838	9.835				
38		9.845						
39		9.849						
40	9.960	9.857	9.857	9.859				
41	9.875	9.871	9.873	9.875				
42	9.889	9.886	9.888	9.890				
43	9.904	9.900	9.902	9.905				
44	9.915	9.911	9.912	9.919				
45	9.926	9.922	9.925	9.934				
46	9.940	9.931	9.935	9.946				
47	9.945	9.936	9.939	9.948				
48	9.966		9.966	9.982				
49	9.963		9.962	9.985				
50	9.959		9.960	9.994				
51	9.953		9.955	10.019				
52	9.946		9.955					
53				9.999				
54				0.000	9.788	10.093	9.790	9.966
55				0.000	9.783	10.176	9.778	9.967
56				*******	9.784	10.181	9.777	
57				9.934	*******	10.179	9.793	
58				9.928		10.178		9.936
59				9.923		10.164		*******
60				9.922	*******	10.175	*******	*******
61	9.897		9.899	9.912	9.916		9.921	
62	9.887		9.888	10.041	10.048		9.906	
63	9.883		9.885	9.894	9.999	9.855	10.005	9.905
64	9.879		9.882	9.888	9.966	9.886	9.968	9.902
65	9.875		9.878	9.886	9.939	9.885	9.939	9.897
66	9.871		9.873	9.882	9.913	9.882	9.911	9.891
67	9.865		9.869	9.877	9.894	9.879	9.894	9.885
68	9.864		9.864	9.872	9.867	9.875	9.864	9.879
69	9.859		9.861	9.868	9.901	9.867	9.847	9.872
70	9.853		9.854	9.862	9.829	9.860	9.828	9.861
71	9.848		9.849	9.858	9.810	9.848	9.808	9.847
72	9.845	*******	9.845	9.851	9.791	9.834	9.792	9.836
73	9.840	*******	9.839	9.846	9.777	9.820	9.778	9.824
74	9.837	*******	9.835	9.838	9.766	9.810	9.768	9.814
75	9.834	*******	9.837	9.841	9.758	9.807	9.758	9.805
76	9.799	*******	9.839	9.809	9.751	9.799	9.753	9.802
77	*******	*******	*******	*******	9.748	9.794	9.749	9.795
78	*******	*******	*******	*******	9.747	9.794	9.753	9.796
79	9.808	9.808	9.842	9.842	9.817	9.816	9.817	9.818

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(w) Vane B in corner 2; IGV setting, 0°; airflow, 35.15 kg/sec; readings 22–29

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		10.014						
2		10.013						
3		10.013						
4		10.013						
5		10.013						
6		10.011						
7		10.012						
8		10.011						
9		10.011						
10		10.006						
34	10.021	10.015	10.013	10.016				
35		10.015						
36		10.017						
37	10.021	10.020	10.019	10.019				
38		10.022						
39		10.024						
40	10.028	10.027	10.027	10.027				
41	10.034	10.032	10.032	10.035				
42	10.039	10.035	10.039	10.040				
43	10.045	10.043	10.044	10.046				
44	10.049	10.048	10.049	10.051				
45	10.054	10.051	10.054	10.056				
46	10.059	10.055	10.055	10.061				
47	10.060	10.057	10.058	10.062				
48	10.068		10.068	10.074				
49	10.068		10.067	10.076				
50	10.066		10.066	10.079				
51	10.064		10.065	10.089				
52	10.061		10.065					
53				10.080				
54				0.000	9.999	10.116	9.999	10.066
55				0.000	9.997	10.151	9.994	10.072
56				*******	9.997	10.154	9.994	
57				10.054	*******	10.150	10.000	
58				10.053		10.152		10.057
59				10.051		10.154		*******
60				10.051	*******	10.151	*******	*******
61	10.042		10.043	10.047	10.049		10.050	
62	10.038		10.039	10.100	10.102		10.045	
63	10.037		10.038	10.040	10.083	10.023	10.084	10.044
64	10.035		10.037	10.038	10.070	10.037	10.070	10.043
65	10.031		10.035	10.037	10.059	10.034	10.059	10.041
66	10.032		10.033	10.036	10.049	10.036	10.049	10.039
67	10.031		10.031	10.034	10.034	10.035	10.034	10.037
68	10.030		10.030	10.032	10.031	10.034	10.031	10.035
69	10.027		10.028	10.030	10.058	10.031	10.023	10.032
70	10.025		10.026	10.028	10.017	10.028	10.016	10.028
71	10.023		10.023	10.027	10.010	10.023	10.008	10.022
72	10.022	*******	10.022	10.025	10.002	10.018	10.002	10.018
73	10.020	*******	10.020	10.023	9.996	10.012	9.996	10.013
74	10.019	*******	10.019	10.020	9.992	10.008	9.992	10.010
75	10.019	*******	10.019	10.020	9.989	10.004	9.989	10.006
76	10.005	*******	10.020	10.010	9.986	10.004	9.987	10.005
77	*******	*******	*******	*******	9.985	10.002	9.985	10.002
78	*******	*******	*******	*******	9.985	10.002	9.987	10.003
79	10.008	10.008	10.022	10.021	10.011	10.010	10.010	10.010

TABLE VII.—Continued. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(x) Vane B in corner 2; IGV setting, 10°; airflow, 68.28 kg/sec; readings 10–17

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		9.628						
2		9.623						
3		9.620						
4		9.621						
5		9.621						
6		9.615						
7		9.618						
8		9.614						
9		9.612						
10		9.598						
34	9.654	9.632	9.624	9.637				
35		9.633						
36		9.638						
37	9.652	9.649	9.647	9.644				
38		9.659						
39		9.665						
40	9.680	9.677	9.677	9.678				
41	9.702	9.697	9.700	9.702				
42	9.723	9.720	9.722	9.725				
43	9.746	9.739	9.742	9.748				
44	9.761	9.756	9.762	9.769				
45	9.777	9.772	9.781	9.788				
46	9.799	9.784	9.795	9.807				
47	9.807	9.794	9.797	9.812				
48	9.837		9.837	9.860				
49	9.833		9.831	9.865				
50	9.825		9.826	9.878				
51	9.819		9.822	9.915				
52	9.809		9.822					
53				9.888				
54				0.000	9.578	10.022	9.583	9.837
55				0.000	9.573	10.141	9.565	9.844
56				*******	9.572	10.146	9.565	
57				9.792	*******	10.148	9.587	
58				9.785		10.145		9.794
59				9.775		10.127		*******
60				9.774	*******	10.144	*******	*******
61	9.737		9.740	9.758	9.764		9.772	
62	9.720		9.722	9.943	9.955		9.750	
63	9.715		9.718	9.731	9.888	9.682	9.891	9.746
64	9.709		9.712	9.723	9.835	9.721	9.838	9.742
65	9.702		9.706	9.719	9.796	9.719	9.797	9.736
66	9.697		9.701	9.714	9.758	9.714	9.760	9.728
67	9.689		9.693	9.707	9.726	9.710	9.726	9.719
68	9.687		9.687	9.699	9.691	9.703	9.691	9.709
69	9.679		9.681	9.693	9.701	9.690	9.660	9.697
70	9.670		9.672	9.683	9.633	9.678	9.633	9.683
71	9.663		9.664	9.678	9.607	9.661	9.604	9.663
72	9.658	*******	9.657	9.668	9.581	9.642	9.583	9.647
73	9.652	*******	9.650	9.661	9.560	9.622	9.561	9.629
74	9.649	*******	9.644	9.648	9.543	9.603	9.544	9.614
75	9.644	*******	9.647	9.651	9.532	9.596	9.531	9.600
76	9.599	*******	9.672	9.605	9.522	9.585	9.523	9.596
77	*******	*******	*******	*******	9.518	9.581	9.513	9.587
78	*******	*******	*******	*******	9.518	9.580	9.523	9.589
79	9.601	9.601	9.654	9.653	9.614	9.613	9.621	9.621

TABLE VII.—Concluded. AXIAL STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(y) Vane B in corner 2; IGV setting, 10°; airflow, 35.36 kg/sec; readings 21-30

AXIAL STATION	OUTER WALL CIRCUMFERENTIAL LOCATION, DEG				CENTERBODY CIRCUMFERENTIAL LOCATION, DEG			
	0	90	180	270	0	90	180	270
1		10.014						
2		10.013						
3		10.012						
4		10.013						
5		10.013						
6		10.011						
7		10.011						
8		10.011						
9		10.010						
10		10.005						
34	10.021	10.015	10.013	10.015				
35		10.015						
36		10.017						
37	10.020	10.016	10.019	10.018				
38		10.022						
39		10.024						
40	10.027	10.026	10.027	10.027				
41	10.034	10.032	10.033	10.034				
42	10.039	10.035	10.039	10.040				
43	10.044	10.043	10.044	10.046				
44	10.049	10.048	10.049	10.051				
45	10.053	10.051	10.054	10.056				
46	10.059	10.054	10.057	10.060				
47	10.060	10.057	10.058	10.062				
48	10.068		10.068	10.074				
49	10.064		10.067	10.075				
50	10.066		10.066	10.079				
51	10.064		10.064	10.088				
52	10.061		10.064					
53				10.079				
54				0.000	9.999	10.116	10.000	10.066
55				0.000	9.997	10.149	9.994	10.072
56				*******	9.996	10.154	9.994	
57				10.054	*******	10.153	10.000	
58				10.053		10.152		10.056
59				10.050		10.152		*******
60				10.050	*******	10.151	*******	*******
61	10.042		10.041	10.047	10.048		10.050	
62	10.038		10.039	10.100	10.102		10.045	
63	10.036		10.037	10.040	10.083	10.022	10.084	10.044
64	10.035		10.036	10.038	10.069	10.036	10.069	10.044
65	10.033		10.035	10.037	10.059	10.036	10.059	10.041
66	10.032		10.032	10.035	10.049	10.037	10.049	10.040
67	10.030		10.031	10.035	10.037	10.035	10.037	10.036
68	10.029		10.029	10.032	10.031	10.034	10.031	10.035
69	10.026		10.028	10.030	10.057	10.031	10.023	10.031
70	10.024		10.026	10.028	10.016	10.028	10.016	10.028
71	10.023		10.023	10.027	10.008	10.024	10.008	10.022
72	10.022	*******	10.022	10.025	10.001	10.017	10.002	10.018
73	10.017	*******	10.020	10.023	9.996	10.013	9.996	10.013
74	10.019	*******	10.018	10.020	9.988	10.009	9.992	10.009
75	10.018	*******	10.019	10.020	9.988	10.001	9.988	10.005
76	10.004	*******	10.020	10.009	9.985	10.004	9.986	10.005
77	*******	*******	*******	*******	9.984	10.002	9.985	10.002
78	*******	*******	*******	*******	9.984	10.002	9.986	10.003
79	10.008	10.008	10.019	10.021	10.011	10.011	10.010	10.011

TABLE VIII.—STATIC-PRESSURE DISTRIBUTION AT INLET GUIDE VANE EXIT

[Pressures are in newtons per square centimeter.]

(a) Vane A in corner 2; IGV setting, −10°; airflow, 69.09 kg/sec; readings 281-290

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.546	9.490
2	9.536	9.479
3	9.557	9.473
4	9.545	9.469
5	9.535	9.457
6	9.566	9.484
7	9.541	9.491
8	9.536	9.496
9	9.543	9.493
10	9.553	9.496
11	9.556	9.490
12	9.547	9.498
AVG	9.547	9.485

(b) Vane A in corner 2; IGV setting, 0°; airflow, 82.30 kg/sec; readings 299-302

CIRCUM LOCATION	DEG.	OUTER WALL	CENTERBODY
1	15	9.299	9.291
2	45	9.296	9.276
3	75	9.352	9.267
4	105	9.307	9.269
5	135	9.318	9.255
6	165	9.338	9.291
7	195	9.303	9.299
8	225	9.310	9.298
9	255	9.327	9.294
10	285	9.314	9.295
11	315	9.324	9.291
12	345	9.334	9.300
AVG		9.318	9.285

(c) Vane A in corner 2; IGV setting, 0°; airflow, 76.18 kg/sec; readings 295-298

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.423	9.402
2	9.410	9.393
3	9.438	9.382
4	9.432	9.383
5	9.426	9.377
6	9.432	9.404
7	9.423	9.407
8	9.422	9.411
9	9.426	9.405
10	9.436	9.405
11	9.436	9.405
12	9.427	9.410
AVG	9.427	9.399

(d) Vane A in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 279-289

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.560	9.541
2	9.550	9.534
3	9.571	9.521
4	9.567	9.527
5	9.564	9.522
6	9.566	9.539
7	9.560	9.547
8	9.559	9.549
9	9.562	9.544
10	9.566	9.547
11	9.570	9.545
12	9.563	9.549
AVG	9.563	9.539

(e) Vane A in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 291-294

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.992	9.990
2	9.991	9.987
3	10.000	9.986
4	9.994	9.987
5	9.996	9.986
6	9.999	9.991
7	9.994	9.993
8	9.995	9.993
9	9.997	9.992
10	9.995	9.993
11	9.997	9.991
12	9.998	9.993
AVG	9.996	9.990

(f) Vane A in corner 2; IGV setting, 10°; airflow, 68.41 kg/sec; readings 280-288

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.568	9.556
2	9.557	9.548
3	9.573	9.530
4	9.577	9.540
5	9.579	9.539
6	9.579	9.557
7	9.570	9.562
8	9.571	9.564
9	9.571	9.558
10	9.577	9.563
11	9.575	9.562
12	9.571	9.565
AVG	9.572	9.554

TABLE VIII.—Continued. STATIC-PRESSURE DISTRIBUTION AT INLET GUIDE VANE EXIT

[Pressures are in newtons per square centimeter.]

(g) Vane A2 in corner 2; IGV setting, 0°; airflow, 82.13 kg/sec; readings 307-310

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.303	9.294
2	9.295	9.273
3	9.328	9.265
4	9.294	9.272
5	9.312	9.256
6	9.337	9.291
7	9.299	9.302
8	9.311	9.295
9	9.333	9.298
10	9.316	9.301
11	9.339	9.297
12	9.337	9.305
AVG	9.317	9.287

(h) Vane A2 in corner 2; IGV setting, 0°; airflow, 76.09 kg/sec; readings 303-306

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.420	9.398
2	9.404	9.384
3	9.414	9.374
4	9.420	9.378
5	9.426	9.370
6	9.427	9.398
7	9.416	9.406
8	9.418	9.404
9	9.424	9.404
10	9.435	9.404
11	9.439	9.406
12	9.427	9.410
AVG	9.423	9.395

(i) Vane A2 in corner 2; IGV setting, 0°; airflow, 69.14 kg/sec; readings 311-314

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.558	9.542
2	9.546	9.530
3	9.555	9.522
4	9.556	9.524
5	9.561	9.519
6	9.563	9.541
7	9.554	9.547
8	9.556	9.546
9	9.561	9.546
10	9.570	9.547
11	9.574	9.547
12	9.563	9.551
AVG	9.560	9.538

(j) Vane A2 in corner 2; IGV setting, 0°; airflow, 35.45 kg/sec; readings 315-318

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.993	9.991
2	9.991	9.986
3	9.996	9.986
4	9.991	9.988
5	9.996	9.985
6	9.999	9.991
7	9.993	9.994
8	9.996	9.993
9	9.998	9.994
10	9.996	9.995
11	9.998	9.993
12	9.999	9.995
AVG	9.995	9.991

(k) Vane A3 in corner 2; IGV setting, 0°; airflow, 76.16 kg/sec; readings 327-330

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.436	9.417
2	9.416	9.408
3	9.452	9.398
4	9.447	9.398
5	9.444	9.394
6	9.446	9.421
7	9.435	9.425
8	9.435	9.426
9	9.437	9.421
10	9.449	9.422
11	9.449	9.421
12	9.440	9.426
AVG	9.441	9.415

(l) Vane A3 in corner 2; IGV setting, 0°; airflow, 69.19 kg/sec; readings 323-326

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.557	9.552
2	9.548	9.540
3	9.590	9.534
4	9.562	9.537
5	9.571	9.530
6	9.582	9.552
7	9.558	9.557
8	9.563	9.555
9	9.578	9.553
10	9.565	9.556
11	9.575	9.552
12	9.580	9.558
AVG	9.569	9.548

TABLE VIII.—Continued. STATIC-PRESSURE DISTRIBUTION AT INLET GUIDE VANE EXIT

[Pressures are in newtons per square centimeter.]

(m) Vane A3 in corner 2; IGV setting, 0°; airflow, 35.51 kg/sec; readings 319-322

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.995	9.991
2	9.993	9.989
3	9.999	9.988
4	9.997	9.989
5	9.998	9.988
6	9.998	9.993
7	9.997	9.994
8	9.997	9.994
9	9.996	9.994
10	9.998	9.994
11	9.998	9.993
12	9.993	9.994
AVG	9.997	9.992

(n) Vane A4 in corner 2; IGV setting, 0°; airflow, 76.29 kg/sec; readings 331-334

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.418	9.414
2	9.408	9.396
3	9.444	9.389
4	9.415	9.395
5	9.436	9.383
6	9.452	9.414
7	9.419	9.423
8	9.427	9.417
9	9.450	9.418
10	9.432	9.420
11	9.450	9.417
12	9.450	9.424
AVG	9.433	9.409

(o) Vane A4 in corner 2; IGV setting, 0°; airflow, 69.31 kg/sec; readings 335-338

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.560	9.545
2	9.533	9.534
3	9.560	9.526
4	9.559	9.528
5	9.566	9.523
6	9.567	9.546
7	9.554	9.552
8	9.559	9.549
9	9.563	9.550
10	9.572	9.548
11	9.577	9.550
12	9.565	9.554
AVG	9.561	9.542

(p) Vane A4 in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 339-342

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.993	9.991
2	9.989	9.987
3	9.998	9.986
4	9.992	9.988
5	9.997	9.986
6	9.999	9.992
7	9.994	9.995
8	9.997	9.993
9	9.998	9.994
10	9.997	9.995
11	9.992	9.993
12	9.999	9.995
AVG	9.996	9.991

(q) Vane B in corner 2; IGV setting, −10°; airflow, 68.98 kg/sec; readings 9-19

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.527	9.482
2	9.524	9.469
3	9.540	9.466
4	9.533	9.467
5	9.529	9.463
6	9.534	9.483
7	9.529	9.485
8	9.527	9.486
9	9.526	9.487
10	9.544	9.487
11	9.546	9.487
12	9.539	9.492
AVG	9.533	9.480

(r) Vane B in corner 2; IGV setting, −10°; airflow, 35.35 kg/sec; readings 20-31

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.992	9.982
2	9.992	9.978
3	10.002	9.979
4	9.995	9.980
5	9.995	9.978
6	9.998	9.983
7	9.993	9.984
8	9.994	9.984
9	9.997	9.985
10	9.996	9.986
11	9.999	9.984
12	9.999	9.986
AVG	9.996	9.982

TABLE VIII.—Continued. STATIC-PRESSURE DISTRIBUTION AT INLET GUIDE VANE EXIT

[Pressures are in newtons per square centimeter.]

(s) Vane B in corner 2; IGV setting, 0°; airflow, 76.17 kg/sec; readings 41–44

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.426	9.408
2	9.413	9.394
3	9.441	9.388
4	9.434	9.388
5	9.432	9.384
6	9.434	9.411
7	9.431	9.414
8	9.426	9.413
9	9.436	9.414
10	9.442	9.414
11	9.446	9.415
12	9.436	9.418
AVG	9.433	9.405

(t) Vane B in corner 2; IGV setting, 0°; airflow, 73.99 kg/sec; readings 36–40

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.444	9.440
2	9.441	9.422
3	9.483	9.420
4	9.454	9.427
5	9.458	9.414
6	9.473	9.442
7	9.451	9.447
8	9.454	9.442
9	9.475	9.444
10	9.459	9.446
11	9.473	9.444
12	9.478	9.449
AVG	9.462	9.436

(u) Vane B in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 8–18

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.555	9.541
2	9.545	9.530
3	9.565	9.526
4	9.563	9.529
5	9.562	9.525
6	9.560	9.544
7	9.558	9.546
8	9.555	9.546
9	9.561	9.545
10	9.566	9.544
11	9.568	9.545
12	9.561	9.547
AVG	9.560	9.539

(v) Vane B in corner 2; IGV setting, 0°; airflow, 56.55 kg/sec; readings 32–35

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.786	9.774
2	9.780	9.771
3	9.794	9.768
4	9.792	9.771
5	9.791	9.768
6	9.791	9.780
7	9.789	9.782
8	9.787	9.782
9	9.791	9.781
10	9.794	9.782
11	9.797	9.781
12	9.792	9.783
AVG	9.791	9.777

(w) Vane B in corner 2; IGV setting, 0°; airflow, 35.15 kg/sec; readings 22–29

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.998	9.999
2	9.998	9.996
3	10.006	9.995
4	9.999	9.996
5	10.002	9.995
6	10.007	9.999
7	9.999	10.000
8	10.001	10.000
9	10.007	9.996
10	9.999	10.001
11	10.003	9.999
12	10.006	10.001
AVG	10.002	9.998

(x) Vane B in corner 2; IGV setting, 10°; airflow, 68.28 kg/sec; readings 10–17

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.566	9.558
2	9.556	9.549
3	9.575	9.540
4	9.575	9.544
5	9.579	9.544
6	9.573	9.560
7	9.573	9.564
8	9.571	9.565
9	9.577	9.561
10	9.578	9.563
11	9.580	9.562
12	9.573	9.566
AVG	9.573	9.556

TABLE VIII.—Concluded. STATIC-PRESSURE DISTRIBUTION AT INLET GUIDE VANE EXIT

[Pressures are in newtons per square centimeter.]

(y) Vane B in corner 2; IGV setting, 10°; airflow, 35.36 kg/sec; readings 21-30

CIRCUM LOCATION	OUTER WALL	CENTERBODY
1	9.994	9.993
2	9.994	9.989
3	10.001	9.989
4	9.996	9.991
5	9.998	9.989
6	10.000	9.994
7	9.996	9.995
8	9.996	9.994
9	9.999	9.994
10	9.997	9.995
11	9.999	9.993
12	10.000	9.994
AVG	9.997	9.993

TABLE IX.—VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(a) Vane A in corner 2; IGV setting, −10°; airflow, 69.09 kg/sec; readings 281-290

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.817	1.004	9.734	1.215
15	9.855	0.909	9.720	1.250
30	9.854	0.911	9.696	1.310
45	9.860	0.895	9.659	1.403
60	9.885	0.833	9.653	1.420
75	9.893	0.811	******	******
90	9.901	0.791	******	******
105	9.898	0.798	******	******
120	9.884	0.834	9.661	1.397
135	9.862	0.890	9.662	1.396
150	9.858	0.900	9.686	1.335
165	9.857	0.902	9.719	1.251
180	9.817	1.004	9.735	1.211
195	9.780	1.097	9.701	1.298
210	9.771	1.121	9.652	1.420
225	9.772	1.116	9.607	1.535
240	9.786	1.081	9.565	1.641
255	9.805	1.035	9.563	1.646
270	9.761	1.146	9.621	1.500
285	9.816	1.006	9.590	1.577
300	9.760	1.147	9.581	1.600
315	9.762	1.144	9.625	1.490
330	9.743	1.192	9.669	1.377
345	9.771	1.121	9.714	1.263

(b) Vane A in corner 2; IGV setting, 0°; airflow, 82.30 kg/sec; readings 299-302

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.692	0.992	9.564	1.219
15	9.742	0.903	9.543	1.256
30	9.741	0.904	9.510	1.315
45	9.745	0.897	9.454	1.414
60	9.789	0.819	9.444	1.432
75	9.799	0.801	******	******
90	9.807	0.786	******	******
105	9.803	0.793	******	******
120	9.783	0.830	9.461	1.401
135	9.751	0.887	9.457	1.410
150	9.747	0.894	9.493	1.345
165	9.744	0.899	9.543	1.257
180	9.692	0.992	9.565	1.217
195	9.632	1.097	9.513	1.310
210	9.619	1.121	9.442	1.435
225	9.623	1.114	9.381	1.544
240	9.644	1.076	9.323	1.647
255	9.674	1.023	9.305	1.680
270	9.613	1.132	9.392	1.525
285	9.687	1.000	9.349	1.602
300	9.605	1.146	9.342	1.614
315	9.606	1.144	9.404	1.503
330	9.577	1.195	9.466	1.393
345	9.619	1.121	9.536	1.270

TABLE IX.–Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(c) Vane A in corner 2; IGV setting, 0°; airflow, 76.18 kg/sec; readings 295–298

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.747	1.012	9.637	1.239
15	9.784	0.935	9.619	1.276
30	9.789	0.924	9.590	1.337
45	9.796	0.909	9.543	1.434
60	9.827	0.845	9.533	1.455
75	9.839	0.821	******	******
90	9.848	0.802	******	******
105	9.844	0.811	******	******
120	9.827	0.846	9.550	1.421
135	9.799	0.904	9.547	1.426
150	9.794	0.915	9.576	1.366
165	9.792	0.918	9.618	1.278
180	9.747	1.012	9.638	1.237
195	9.692	1.125	9.594	1.329
210	9.684	1.142	9.534	1.453
225	9.687	1.137	9.478	1.570
240	9.705	1.098	9.429	1.672
255	9.731	1.044	9.416	1.698
270	9.676	1.158	9.493	1.539
285	9.742	1.022	9.455	1.618
300	9.673	1.164	9.446	1.636
315	9.673	1.164	9.499	1.525
330	9.649	1.216	9.556	1.407
345	9.685	1.141	9.613	1.289

(d) Vane A in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 279–289

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.818	0.999	9.730	1.220
15	9.852	0.913	9.716	1.256
30	9.851	0.914	9.691	1.317
45	9.857	0.900	9.655	1.410
60	9.883	0.835	9.647	1.429
75	9.892	0.813	******	******
90	9.900	0.792	******	******
105	9.896	0.802	******	******
120	9.882	0.837	9.660	1.398
135	9.860	0.893	9.659	1.400
150	9.856	0.903	9.682	1.342
165	9.854	0.906	9.715	1.257
180	9.818	0.999	9.732	1.216
195	9.776	1.103	9.697	1.304
210	9.768	1.124	9.648	1.426
225	9.769	1.122	9.603	1.541
240	9.783	1.085	9.560	1.648
255	9.802	1.037	9.557	1.656
270	9.758	1.150	9.616	1.507
285	9.813	1.010	9.585	1.585
300	9.759	1.148	9.577	1.606
315	9.759	1.147	9.620	1.498
330	9.739	1.197	9.665	1.383
345	9.767	1.127	9.711	1.269

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(e) Vane A in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 291–294

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	10.056	0.927	10.035	1.127
15	10.064	0.848	10.031	1.162
30	10.063	0.856	10.025	1.227
45	10.064	0.850	10.018	1.287
60	10.070	0.792	10.016	1.307
75	10.072	0.766	******	******
90	10.073	0.756	******	******
105	10.073	0.763	******	******
120	10.070	0.792	10.018	1.290
135	10.064	0.843	10.016	1.313
150	10.064	0.846	10.025	1.227
165	10.063	0.857	10.032	1.161
180	10.056	0.927	10.035	1.127
195	10.046	1.024	10.027	1.201
210	10.044	1.043	10.015	1.316
225	10.044	1.041	10.007	1.401
240	10.047	1.014	9.994	1.522
255	10.050	0.983	9.997	1.498
270	10.039	1.085	10.009	1.379
285	10.052	0.962	10.004	1.429
300	10.041	1.068	9.999	1.471
315	10.041	1.074	10.010	1.373
330	10.037	1.112	10.020	1.268
345	10.044	1.041	10.031	1.165

(f) Vane A in corner 2; IGV setting, 10°; airflow, 68.41 kg/sec; readings 280–288

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.815	1.026	9.730	1.243
15	9.852	0.930	9.716	1.281
30	9.851	0.932	9.691	1.344
45	9.857	0.917	9.653	1.441
60	9.881	0.853	9.645	1.462
75	9.891	0.829	******	******
90	9.899	0.809	******	******
105	9.895	0.818	******	******
120	9.882	0.853	9.658	1.429
135	9.859	0.911	9.657	1.431
150	9.855	0.922	9.681	1.370
165	9.853	0.926	9.715	1.283
180	9.815	1.026	9.731	1.240
195	9.777	1.124	9.697	1.328
210	9.768	1.146	9.649	1.453
225	9.769	1.143	9.602	1.573
240	9.782	1.108	9.561	1.680
255	9.802	1.057	9.558	1.686
270	9.757	1.173	9.616	1.537
285	9.813	1.030	9.586	1.614
300	9.758	1.172	9.577	1.639
315	9.759	1.170	9.620	1.526
330	9.739	1.221	9.666	1.409
345	9.768	1.147	9.711	1.292

C-2

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(g) Vane A2 in corner 2; IGV setting, 0°; airflow, 82.13 kg/sec; readings 307–310

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.711	0.924	9.603	1.117
15	9.736	0.880	9.540	1.230
30	9.717	0.914	9.499	1.302
45	9.707	0.932	9.424	1.436
60	9.748	0.858	9.409	1.463
75	9.739	0.875	******	******
90	9.742	0.869	******	******
105	9.742	0.869	******	******
120	9.728	0.894	9.427	1.430
135	9.709	0.929	9.428	1.429
150	9.723	0.902	9.493	1.313
165	9.738	0.876	9.538	1.234
180	9.711	0.924	9.609	1.106
195	9.684	0.972	9.588	1.143
210	9.669	0.999	9.546	1.218
225	9.689	0.963	9.473	1.349
240	9.717	0.913	9.438	1.410
255	9.742	0.869	9.603	1.116
270	9.709	0.928	9.596	1.129
285	9.753	0.849	9.540	1.230
300	9.690	0.962	9.491	1.317
315	9.672	0.993	9.501	1.299
330	9.635	1.059	9.566	1.183
345	9.672	0.993	9.604	1.115

(h) Vane A2 in corner 2; IGV setting, 0°; airflow, 76.09 kg/sec; readings 303–306

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.762	0.945	9.669	1.137
15	9.783	0.901	9.613	1.253
30	9.766	0.936	9.579	1.325
45	9.758	0.954	9.513	1.461
60	9.791	0.883	9.502	1.484
75	9.786	0.894	******	******
90	9.789	0.888	******	******
105	9.789	0.888	******	******
120	9.777	0.914	9.516	1.456
135	9.759	0.950	9.517	1.453
150	9.773	0.922	9.573	1.336
165	9.786	0.894	9.609	1.263
180	9.762	0.945	9.674	1.126
195	9.740	0.990	9.657	1.163
210	9.727	1.018	9.620	1.240
225	9.744	0.982	9.555	1.374
240	9.768	0.932	9.526	1.435
255	9.790	0.887	9.675	1.126
270	9.760	0.949	9.665	1.147
285	9.799	0.867	9.616	1.247
300	9.745	0.980	9.572	1.339
315	9.734	1.002	9.580	1.322
330	9.697	1.080	9.637	1.204
345	9.728	1.014	9.670	1.135

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(i) Vane A2 in corner 2; IGV setting, 0°; airflow, 69.14 kg/sec; readings 311-314

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.830	0.935	9.756	1.121
15	9.847	0.891	9.712	1.232
30	9.834	0.925	9.684	1.303
45	9.827	0.943	9.632	1.436
60	9.856	0.869	9.619	1.467
75	9.849	0.887	******	******
90	9.851	0.883	******	******
105	9.851	0.882	******	******
120	9.842	0.905	9.633	1.433
135	9.829	0.939	9.633	1.431
150	9.838	0.914	9.679	1.316
165	9.850	0.885	9.709	1.241
180	9.830	0.935	9.759	1.113
195	9.813	0.978	9.746	1.147
210	9.803	1.002	9.717	1.220
225	9.817	0.968	9.665	1.352
240	9.827	0.942	9.642	1.410
255	9.854	0.876	9.765	1.100
270	9.829	0.938	9.754	1.127
285	9.861	0.857	9.717	1.221
300	9.818	0.966	9.679	1.316
315	9.809	0.988	9.685	1.301
330	9.780	1.062	9.731	1.184
345	9.804	1.002	9.759	1.114

(j) Vane A2 in corner 2; IGV setting, 0°; airflow, 35.45 kg/sec; readings 315-318

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	10.058	0.870	10.040	1.049
15	10.063	0.831	10.030	1.150
30	10.059	0.864	10.021	1.229
45	10.057	0.880	10.011	1.326
60	10.063	0.822	10.007	1.367
75	10.063	0.830	******	******
90	10.063	0.831	******	******
105	10.062	0.837	******	******
120	10.061	0.850	10.011	1.326
135	10.057	0.883	10.012	1.318
150	10.057	0.882	10.024	1.204
165	10.063	0.829	10.031	1.139
180	10.058	0.870	10.042	1.027
195	10.054	0.911	10.040	1.051
210	10.052	0.930	10.033	1.114
225	10.055	0.904	10.021	1.235
240	10.060	0.859	10.015	1.292
255	10.063	0.827	10.046	0.987
270	10.058	0.878	10.041	1.039
285	10.065	0.812	10.035	1.102
300	10.056	0.891	10.024	1.207
315	10.054	0.909	10.025	1.196
330	10.046	0.990	10.035	1.096
345	10.052	0.929	10.041	1.038

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(k) Vane A3 in corner 2; IGV setting, 0°; airflow, 76.16 kg/sec; readings 327-330

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.755	0.992	9.643	1.226
15	9.801	0.897	9.626	1.261
30	9.800	0.899	9.598	1.318
45	9.806	0.885	9.549	1.420
60	9.842	0.810	9.544	1.431
75	9.847	0.801	******	******
90	9.854	0.786	******	******
105	9.860	0.773	******	******
120	9.834	0.827	9.560	1.398
135	9.807	0.884	9.560	1.398
150	9.802	0.895	9.589	1.337
165	9.801	0.897	9.628	1.256
180	9.755	0.992	9.652	1.206
195	9.709	1.088	9.612	1.290
210	9.681	1.147	9.559	1.401
225	9.685	1.138	9.494	1.534
240	9.695	1.118	9.414	1.702
255	9.663	1.184	9.485	1.555
270	9.705	1.095	9.602	1.310
285	9.641	1.229	9.463	1.599
300	9.674	1.161	9.452	1.623
315	9.680	1.149	9.494	1.536
330	9.658	1.194	9.557	1.403
345	9.703	1.100	9.620	1.274

(l) Vane A3 in corner 2; IGV setting, 0°; airflow, 69.19 kg/sec; readings 323-326

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.822	0.986	9.734	1.209
15	9.860	0.892	9.720	1.245
30	9.859	0.894	9.698	1.301
45	9.865	0.879	9.659	1.398
60	9.892	0.810	9.653	1.413
75	9.898	0.796	******	******
90	9.904	0.780	******	******
105	9.900	0.791	******	******
120	9.887	0.822	9.665	1.383
135	9.862	0.886	9.666	1.382
150	9.860	0.891	9.690	1.320
165	9.860	0.890	9.721	1.242
180	9.822	0.986	9.739	1.196
195	9.786	1.078	9.708	1.275
210	9.762	1.138	9.664	1.387
225	9.766	1.129	9.615	1.510
240	9.770	1.117	9.549	1.676
255	9.746	1.178	9.610	1.523
270	9.785	1.082	9.703	1.286
285	9.729	1.221	9.592	1.566
300	9.754	1.160	9.579	1.600
315	9.761	1.140	9.613	1.514
330	9.743	1.187	9.666	1.382
345	9.781	1.090	9.716	1.255

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(m) Vane A3 in corner 2; IGV setting, 0°; airflow, 35.51 kg/sec; readings 319–322

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	10.056	0.922	10.035	1.126
15	10.065	0.836	10.032	1.158
30	10.065	0.835	10.025	1.224
45	10.066	0.831	10.019	1.282
60	10.072	0.764	10.017	1.302
75	10.074	0.752	******	******
90	10.075	0.742	******	******
105	10.073	0.758	******	******
120	10.071	0.783	10.019	1.280
135	10.066	0.829	10.020	1.272
150	10.065	0.837	10.026	1.212
165	10.064	0.842	10.033	1.143
180	10.056	0.922	10.037	1.105
195	10.047	1.006	10.030	1.171
210	10.041	1.064	10.020	1.274
225	10.042	1.055	10.012	1.343
240	10.042	1.060	9.992	1.538
255	10.038	1.098	10.008	1.381
270	10.048	1.000	10.031	1.167
285	10.033	1.145	10.006	1.409
300	10.040	1.081	9.999	1.473
315	10.041	1.068	10.007	1.394
330	10.038	1.101	10.020	1.269
345	10.046	1.015	10.031	1.162

(n) Vane A4 in corner 2; IGV setting, 0°; airflow, 76.29 kg/sec; readings 331–334

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.766	0.925	9.669	1.126
15	9.786	0.885	9.620	1.228
30	9.777	0.902	9.585	1.300
45	9.771	0.916	9.522	1.430
60	9.804	0.847	9.520	1.434
75	9.915	0.618	******	******
90	9.803	0.849	******	******
105	9.813	0.829	******	******
120	9.787	0.883	9.524	1.426
135	9.769	0.919	9.526	1.421
150	9.779	0.899	9.583	1.304
165	9.786	0.885	9.619	1.230
180	9.766	0.925	9.681	1.102
195	9.741	0.976	9.668	1.129
210	9.728	1.005	9.636	1.194
225	9.741	0.978	9.584	1.301
240	9.758	0.941	9.542	1.390
255	9.757	0.943	9.670	1.123
270	9.791	0.873	9.741	0.977
285	9.739	0.982	9.663	1.138
300	9.740	0.980	9.567	1.337
315	9.737	0.986	9.597	1.276
330	9.706	1.049	9.642	1.183
345	9.736	0.987	9.672	1.119

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(o) Vane A4 in corner 2; IGV setting, 0°; airflow, 69.31 kg/sec; readings 335–338

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.831	0.923	9.753	1.121
15	9.847	0.884	9.711	1.225
30	9.840	0.902	9.683	1.295
45	9.834	0.916	9.633	1.422
60	9.861	0.848	9.631	1.427
75	9.857	0.858	******	******
90	9.860	0.850	******	******
105	9.869	0.828	******	******
120	9.847	0.884	9.634	1.418
135	9.833	0.919	9.637	1.412
150	9.841	0.900	9.682	1.299
165	9.847	0.885	9.711	1.227
180	9.831	0.923	9.760	1.101
195	9.811	0.975	9.751	1.124
210	9.800	1.002	9.725	1.190
225	9.810	0.977	9.684	1.292
240	9.824	0.942	9.651	1.376
255	9.823	0.944	9.754	1.116
270	9.855	0.865	9.811	0.975
285	9.810	0.978	9.750	1.127
300	9.810	0.977	9.672	1.323
315	9.808	0.983	9.695	1.267
330	9.783	1.045	9.731	1.174
345	9.804	0.993	9.756	1.113

(p) Vane A4 in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 339–342

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	10.059	0.857	10.040	1.043
15	10.063	0.827	10.031	1.137
30	10.062	0.837	10.023	1.209
45	10.060	0.852	10.014	1.298
60	10.066	0.797	10.013	1.302
75	10.065	0.802	******	******
90	10.065	0.799	******	******
105	10.068	0.770	******	******
120	10.062	0.829	10.015	1.287
135	10.059	0.858	10.016	1.274
150	10.062	0.834	10.027	1.174
165	10.063	0.819	10.033	1.115
180	10.059	0.857	10.044	1.007
195	10.054	0.908	10.042	1.026
210	10.052	0.926	10.035	1.089
225	10.055	0.901	10.022	1.215
240	10.057	0.877	10.019	1.244
255	10.057	0.876	10.041	1.033
270	10.065	0.802	10.057	0.880
285	10.054	0.911	10.041	1.031
300	10.055	0.904	10.024	1.204
315	10.055	0.897	10.026	1.175
330	10.049	0.957	10.036	1.084
345	10.053	0.916	10.041	1.031

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(q) Vane B in corner 2; IGV setting, −10°; airflow, 68.98 kg/sec; readings 9–19

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.804	0.983	9.729	1.173
15	9.812	0.964	9.697	1.253
30	9.809	0.972	9.678	1.302
45	9.803	0.987	9.640	1.399
60	9.812	0.964	9.634	1.414
75	9.798	0.998	******	******
90	9.803	0.986	******	******
105	9.808	0.974	******	******
120	9.811	0.968	9.643	1.391
135	9.802	0.989	9.643	1.389
150	9.804	0.984	9.672	1.318
165	9.807	0.976	9.694	1.261
180	9.810	0.969	9.738	1.151
195	9.796	1.004	9.742	1.140
210	9.800	0.995	9.750	1.122
225	9.826	0.929	9.741	1.143
240	9.838	0.899	9.752	1.116
255	9.874	0.807	9.785	1.033
270	9.883	0.784	9.795	1.007
285	9.872	0.814	9.781	1.041
300	9.850	0.868	9.742	1.141
315	9.826	0.929	9.751	1.119
330	9.802	0.989	9.734	1.161
345	9.792	1.015	9.739	1.148

(r) Vane B in corner 2; IGV setting, −10°; airflow, 35.35 kg/sec; readings 20–31

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	10.061	0.861	10.042	1.045
15	10.063	0.836	10.033	1.133
30	10.062	0.850	10.027	1.193
45	10.060	0.865	10.018	1.275
60	10.062	0.849	10.016	1.297
75	10.059	0.881	******	******
90	10.060	0.873	******	******
105	10.061	0.862	******	******
120	10.061	0.857	10.018	1.279
135	10.060	0.871	10.019	1.269
150	10.058	0.889	10.027	1.188
165	10.062	0.847	10.034	1.124
180	10.062	0.855	10.044	1.026
195	10.057	0.903	10.044	1.026
210	10.058	0.891	10.045	1.012
225	10.064	0.828	10.039	1.073
240	10.067	0.796	10.045	1.015
255	10.077	0.707	10.053	0.940
270	10.078	0.691	10.056	0.912
285	10.076	0.712	10.052	0.944
300	10.071	0.766	10.043	1.039
315	10.065	0.822	10.039	1.070
330	10.059	0.884	10.043	1.039
345	10.056	0.911	10.044	1.025

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(s) Vane B in corner 2; IGV setting, 0°; airflow, 76.17 kg/sec; readings 41–44

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.769	0.930	9.667	1.143
15	9.777	0.914	9.617	1.245
30	9.771	0.926	9.590	1.302
45	9.763	0.943	9.529	1.428
60	9.775	0.918	9.522	1.442
75	9.758	0.953	******	******
90	9.764	0.941	******	******
105	9.770	0.929	******	******
120	9.772	0.924	9.544	1.397
135	9.760	0.949	9.541	1.402
150	9.765	0.938	9.580	1.322
165	9.771	0.926	9.618	1.244
180	9.777	0.915	9.680	1.114
195	9.759	0.951	9.685	1.105
210	9.763	0.943	9.694	1.085
225	9.798	0.870	9.678	1.119
240	9.814	0.837	9.699	1.075
255	9.864	0.733	9.745	0.981
270	9.879	0.702	9.760	0.950
285	9.863	0.735	9.742	0.987
300	9.832	0.799	9.685	1.105
315	9.799	0.868	9.667	1.142
330	9.766	0.936	9.678	1.120
345	9.753	0.964	9.678	1.119

(t) Vane B in corner 2; IGV setting, 0°; airflow, 73.99 kg/sec; readings 36–40

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.783	0.946	9.684	1.163
15	9.791	0.929	9.639	1.262
30	9.786	0.938	9.613	1.318
45	9.775	0.963	9.562	1.431
60	9.790	0.930	9.552	1.454
75	9.773	0.968	******	******
90	9.779	0.954	******	******
105	9.785	0.940	******	******
120	9.788	0.935	9.568	1.418
135	9.777	0.958	9.565	1.424
150	9.781	0.950	9.604	1.338
165	9.785	0.940	9.639	1.262
180	9.789	0.931	9.695	1.140
195	9.773	0.968	9.701	1.125
210	9.776	0.960	9.710	1.105
225	9.810	0.887	9.702	1.124
240	9.826	0.851	9.714	1.098
255	9.874	0.746	9.757	1.002
270	9.888	0.716	9.771	0.971
285	9.872	0.751	9.754	1.010
300	9.842	0.816	9.702	1.124
315	9.811	0.885	9.683	1.166
330	9.779	0.953	9.694	1.141
345	9.766	0.982	9.696	1.136

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(u) Vane B in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 8–18

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.805	0.974	9.729	1.165
15	9.812	0.956	9.698	1.244
30	9.810	0.963	9.678	1.293
45	9.803	0.979	9.640	1.390
60	9.813	0.956	9.633	1.406
75	9.799	0.989	******	******
90	9.804	0.977	******	******
105	9.809	0.965	******	******
120	9.812	0.958	9.645	1.376
135	9.803	0.981	9.645	1.377
150	9.805	0.975	9.672	1.308
165	9.808	0.967	9.695	1.251
180	9.811	0.961	9.739	1.141
195	9.798	0.993	9.743	1.130
210	9.801	0.985	9.750	1.113
225	9.827	0.919	9.742	1.134
240	9.838	0.892	9.753	1.106
255	9.875	0.800	9.785	1.025
270	9.884	0.777	9.796	0.998
285	9.873	0.805	9.782	1.032
300	9.850	0.861	9.743	1.130
315	9.827	0.921	9.752	1.107
330	9.803	0.980	9.738	1.144
345	9.793	1.005	9.740	1.138

(v) Vane B in corner 2; IGV setting, 0°; airflow, 56.55 kg/sec; readings 32–35

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.946	0.865	9.896	1.054
15	9.951	0.844	9.875	1.134
30	9.949	0.852	9.861	1.186
45	9.945	0.867	9.836	1.281
60	9.951	0.845	9.831	1.299
75	9.942	0.878	******	******
90	9.945	0.867	******	******
105	9.948	0.855	******	******
120	9.950	0.848	9.838	1.275
135	9.944	0.870	9.838	1.272
150	9.946	0.863	9.857	1.201
165	9.945	0.866	9.874	1.137
180	9.948	0.856	9.900	1.037
195	9.940	0.888	9.903	1.028
210	9.942	0.880	9.907	1.010
225	9.960	0.812	9.905	1.021
240	9.967	0.783	9.909	1.006
255	9.992	0.691	9.930	0.924
270	9.997	0.669	9.937	0.899
285	9.990	0.695	9.928	0.933
300	9.976	0.751	9.903	1.028
315	9.960	0.812	9.894	1.062
330	9.944	0.873	9.900	1.037
345	9.937	0.899	9.902	1.030

TABLE IX.—Continued. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(w) Vane B in corner 2; IGV setting, 0°; airflow, 35.15 kg/sec; readings 22–29

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	10.061	0.870	10.041	1.060
15	10.063	0.846	10.033	1.141
30	10.062	0.858	10.027	1.201
45	10.061	0.871	10.018	1.290
60	10.062	0.860	10.016	1.313
75	10.056	0.915	******	******
90	10.060	0.875	******	******
105	10.061	0.871	******	******
120	10.061	0.866	10.018	1.291
135	10.060	0.877	10.019	1.280
150	10.061	0.869	10.027	1.200
165	10.063	0.850	10.034	1.138
180	10.062	0.862	10.044	1.035
195	10.057	0.904	10.044	1.036
210	10.058	0.900	10.045	1.024
225	10.065	0.833	10.040	1.079
240	10.067	0.805	10.045	1.020
255	10.077	0.708	10.052	0.953
270	10.079	0.688	10.056	0.918
285	10.076	0.716	10.053	0.949
300	10.071	0.773	10.044	1.038
315	10.065	0.831	10.040	1.077
330	10.059	0.891	10.043	1.043
345	10.057	0.908	10.044	1.035

(x) Vane B in corner 2; IGV setting, 10°; airflow, 68.28 kg/sec; readings 10–17

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	9.807	0.995	9.732	1.189
15	9.816	0.973	9.700	1.271
30	9.812	0.984	9.681	1.320
45	9.806	0.998	9.642	1.419
60	9.815	0.975	9.636	1.437
75	9.802	1.009	******	******
90	9.807	0.997	******	******
105	9.810	0.987	******	******
120	9.813	0.980	9.647	1.407
135	9.804	1.002	9.648	1.406
150	9.807	0.996	9.675	1.335
165	9.811	0.987	9.701	1.268
180	9.812	0.984	9.742	1.164
195	9.800	1.015	9.747	1.151
210	9.803	1.007	9.753	1.133
225	9.829	0.939	9.745	1.156
240	9.840	0.911	9.756	1.126
255	9.876	0.817	9.788	1.044
270	9.886	0.793	9.798	1.018
285	9.874	0.823	9.785	1.052
300	9.852	0.881	9.746	1.152
315	9.828	0.941	9.755	1.130
330	9.805	1.001	9.741	1.166
345	9.795	1.026	9.743	1.161

TABLE IX.—Concluded. VANE INLET AND EXIT STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(y) Vane B in corner 2; IGV setting, 10°; airflow, 35.36 kg/sec; readings 21-30

CIRCUM. LOCATION, DEG.	INLET PRESSURE N/CM2	INLET COEFFIC	EXIT PRESSURE N/CM2	EXIT COEFFIC
0	10.061	0.861	10.042	1.045
15	10.063	0.836	10.033	1.131
30	10.062	0.850	10.027	1.192
45	10.060	0.866	10.015	1.306
60	10.062	0.851	10.016	1.297
75	10.059	0.880	******	******
90	10.060	0.871	******	******
105	10.060	0.864	******	******
120	10.061	0.857	10.018	1.277
135	10.059	0.874	10.019	1.269
150	10.061	0.861	10.027	1.191
165	10.062	0.847	10.031	1.154
180	10.062	0.854	10.044	1.024
195	10.057	0.897	10.044	1.025
210	10.058	0.892	10.046	1.009
225	10.064	0.827	10.039	1.072
240	10.067	0.800	10.045	1.016
255	10.077	0.708	10.052	0.944
270	10.079	0.687	10.055	0.913
285	10.076	0.713	10.052	0.946
300	10.071	0.759	10.043	1.032
315	10.065	0.822	10.037	1.096
330	10.059	0.880	10.043	1.036
345	10.056	0.908	10.044	1.029

TABLE X.—VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(a) Vane A in corner 2; IGV setting, −10°; airflow, 69.09 kg/sec; readings 281-290

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.697	9.697	0.273	0.273	-0.293	-0.293
0.025	9.357	9.956	0.356	0.191	-1.152	0.362
0.050	9.312	9.761	0.366	0.255	-1.266	-0.131
0.075	9.248	9.753	0.379	0.258	-1.427	-0.152
0.100	9.204	9.784	0.389	0.248	-1.540	-0.072
0.150	9.115	9.804	0.406	0.242	-1.764	-0.021
0.200	9.095	9.827	0.410	0.236	-1.815	0.035
0.300	9.043	9.850	0.421	0.228	-1.948	0.094
0.500	9.197	9.831	0.390	0.234	-1.557	0.047
0.700	9.391	9.766	0.348	0.254	-1.066	-0.119
0.800	9.478	9.709	0.329	0.270	-0.847	-0.261
0.850	9.503	9.672	0.323	0.280	-0.784	-0.355
0.900	9.515	9.620	0.320	0.294	-0.754	-0.488
0.950	9.516	9.539	0.320	0.314	-0.752	-0.692

SECTION B

0.000	9.588	9.588	0.302	0.302	-0.568	-0.568
0.025	9.313	10.090	0.366	0.132	-1.264	0.702
0.050	9.311	9.930	0.366	0.201	-1.269	0.296
0.075	9.270	9.916	0.375	0.206	-1.372	0.261
0.100	9.263	9.925	0.376	0.203	-1.389	0.283
0.150	9.246	9.942	0.380	0.197	-1.435	0.328
0.200	9.260	9.957	0.377	0.191	-1.398	0.365
0.300	9.282	9.977	0.372	0.183	-1.344	0.415
0.500	9.479	9.971	0.328	0.186	-0.845	0.400
0.700	9.648	9.928	0.286	0.202	-0.417	0.292
0.800	9.702	9.889	0.272	0.215	-0.281	0.193
0.850	9.716	9.859	0.268	0.225	-0.245	0.118
0.900	9.723	9.825	0.266	0.236	-0.227	0.031
0.950	9.733	9.767	0.263	0.254	-0.201	-0.117

SECTION C

0.000	9.518	9.518	0.319	0.319	-0.745	-0.745
0.025	9.282	10.139	0.372	0.103	-1.344	0.825
0.050	9.250	9.939	0.379	0.198	-1.424	0.320
0.075	9.241	9.920	0.381	0.205	-1.447	0.272
0.100	9.243	9.938	0.380	0.198	-1.441	0.318
0.150	9.228	9.926	0.384	0.203	-1.479	0.286
0.200	9.239	9.952	0.381	0.193	-1.451	0.353
0.300	9.259	9.971	0.377	0.186	-1.400	0.401
0.500	9.450	9.961	0.335	0.189	-0.918	0.376
0.700	9.619	9.914	0.294	0.207	-0.489	0.256
0.800	9.680	9.873	0.278	0.221	-0.336	0.151
0.850	9.697	9.842	0.273	0.231	-0.292	0.074
0.900	9.703	9.805	0.272	0.242	-0.277	-0.020
0.950	9.718	9.741	0.268	0.261	-0.241	-0.181

SECTION D

0.000	9.615	9.615	0.295	0.295	-0.501	-0.501
0.025	9.501	10.145	0.323	0.098	-0.789	0.841
0.050	9.499	9.998	0.324	0.175	-0.794	0.469
0.075	9.497	9.979	0.324	0.182	-0.800	0.421
0.100	9.499	9.983	0.324	0.181	-0.795	0.431
0.150	9.496	9.987	0.324	0.179	-0.802	0.441
0.200	9.506	9.998	0.322	0.175	-0.775	0.469
0.300	9.517	10.010	0.319	0.170	-0.747	0.499
0.500	9.611	9.998	0.296	0.175	-0.511	0.469
0.700	9.701	9.951	0.272	0.193	-0.283	0.351
0.800	9.732	9.908	0.264	0.209	-0.205	0.240
0.850	9.747	9.878	0.259	0.219	-0.165	0.164
0.900	9.795	9.840	0.245	0.231	-0.045	0.069
0.950	9.765	9.773	0.254	0.252	-0.121	-0.100

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(b) Vane A in corner 2; IGV setting, 0°; airflow, 82.30 kg/sec; readings 299–302

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.538	9.538	0.322	0.322	-0.244	-0.244
0.025	9.052	9.854	0.425	0.238	-1.110	0.318
0.050	8.988	9.587	0.437	0.310	-1.222	-0.157
0.075	8.890	9.578	0.455	0.313	-1.397	-0.173
0.100	8.822	9.627	0.468	0.301	-1.519	-0.087
0.150	8.693	9.657	0.491	0.293	-1.747	-0.032
0.200	8.661	9.689	0.496	0.285	-1.805	0.024
0.300	8.581	9.723	0.510	0.275	-1.947	0.085
0.500	8.798	9.699	0.472	0.282	-1.560	0.042
0.700	9.068	9.602	0.422	0.307	-1.081	-0.131
0.800	9.190	9.522	0.398	0.326	-0.864	-0.273
0.850	9.226	9.465	0.391	0.339	-0.800	-0.374
0.900	9.245	9.393	0.387	0.355	-0.766	-0.503
0.950	9.244	9.276	0.387	0.380	-0.767	-0.710

SECTION B

0.000	9.371	9.371	0.360	0.360	-0.542	-0.542
0.025	8.969	10.061	0.441	0.163	-1.256	0.685
0.050	8.971	9.836	0.440	0.243	-1.253	0.285
0.075	8.907	9.817	0.452	0.249	-1.366	0.253
0.100	8.896	9.831	0.454	0.245	-1.386	0.278
0.150	8.869	9.857	0.459	0.237	-1.434	0.324
0.200	8.892	9.878	0.455	0.230	-1.394	0.361
0.300	8.929	9.910	0.448	0.220	-1.328	0.417
0.500	9.201	9.901	0.396	0.223	-0.844	0.402
0.700	9.439	9.840	0.345	0.242	-0.421	0.292
0.800	9.518	9.786	0.327	0.258	-0.280	0.196
0.850	9.537	9.742	0.322	0.270	-0.246	0.118
0.900	9.545	9.692	0.320	0.284	-0.231	0.029
0.950	9.562	9.609	0.316	0.305	-0.202	-0.119

SECTION C

0.000	9.280	9.280	0.379	0.379	-0.702	-0.702
0.025	8.922	10.132	0.450	0.128	-1.341	0.813
0.050	8.877	9.848	0.458	0.240	-1.420	0.307
0.075	8.864	9.823	0.460	0.247	-1.443	0.262
0.100	8.868	9.852	0.459	0.238	-1.436	0.314
0.150	8.847	9.833	0.463	0.244	-1.474	0.281
0.200	8.863	9.874	0.460	0.232	-1.445	0.353
0.300	8.894	9.901	0.455	0.223	-1.390	0.402
0.500	9.158	9.887	0.404	0.227	-0.921	0.376
0.700	9.400	9.819	0.354	0.248	-0.490	0.256
0.800	9.486	9.761	0.334	0.265	-0.336	0.151
0.850	9.510	9.717	0.329	0.277	-0.294	0.073
0.900	9.523	9.663	0.326	0.291	-0.270	-0.022
0.950	9.539	9.572	0.322	0.314	-0.242	-0.183

SECTION D

0.000	9.407	9.407	0.352	0.352	-0.478	-0.478
0.025	9.246	10.148	0.387	0.119	-0.765	0.841
0.050	9.245	9.941	0.387	0.209	-0.766	0.472
0.075	9.241	9.914	0.388	0.218	-0.774	0.425
0.100	9.243	9.920	0.387	0.216	-0.769	0.436
0.150	9.238	9.927	0.388	0.214	-0.778	0.448
0.200	9.252	9.944	0.385	0.208	-0.752	0.478
0.300	9.266	9.963	0.382	0.202	-0.729	0.511
0.500	9.395	9.943	0.355	0.209	-0.499	0.476
0.700	9.518	9.876	0.327	0.231	-0.279	0.357
0.800	9.563	9.813	0.316	0.250	-0.200	0.245
0.850	9.584	9.768	0.311	0.263	-0.163	0.165
0.900	9.641	9.717	0.297	0.277	-0.062	0.074
0.950	9.611	9.621	0.305	0.302	-0.115	-0.097

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(c) Vane A in corner 2; IGV setting, 0°; airflow, 76.18 kg/sec; readings 295-298

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.601	9.601	0.304	0.304	-0.297	-0.297
0.025	9.180	9.902	0.397	0.218	-1.171	0.329
0.050	9.125	9.666	0.408	0.287	-1.285	-0.162
0.075	9.044	9.656	0.424	0.289	-1.453	-0.182
0.100	8.986	9.696	0.435	0.279	-1.573	-0.099
0.150	8.874	9.721	0.456	0.272	-1.805	-0.047
0.200	8.847	9.751	0.461	0.264	-1.862	0.014
0.300	8.780	9.779	0.473	0.256	-2.000	0.072
0.500	8.971	9.757	0.438	0.262	-1.604	0.027
0.700	9.209	9.671	0.391	0.286	-1.111	-0.152
0.800	9.317	9.604	0.369	0.303	-0.885	-0.290
0.850	9.346	9.557	0.363	0.314	-0.826	-0.387
0.900	9.364	9.493	0.359	0.330	-0.788	-0.522
0.950	9.364	9.391	0.359	0.353	-0.789	-0.732
SECTION B						
0.000	9.465	9.465	0.336	0.336	-0.579	-0.579
0.025	9.114	10.074	0.410	0.150	-1.307	0.685
0.050	9.118	9.877	0.410	0.226	-1.298	0.276
0.075	9.063	9.8[illegible]	0.420	0.231	-1.413	0.240
0.100	9.055	9.868	0.422	0.229	-1.430	0.258
0.150	9.031	9.895	0.426	0.220	-1.478	0.313
0.200	9.051	9.911	0.423	0.214	-1.438	0.348
0.300	9.081	9.939	0.417	0.205	-1.375	0.404
0.500	9.321	9.931	0.368	0.208	-0.878	0.388
0.700	9.530	9.877	0.321	0.226	-0.445	0.277
0.800	9.596	9.827	0.305	0.242	-0.307	0.173
0.850	9.614	9.793	0.300	0.252	-0.269	0.101
0.900	9.623	9.749	0.298	0.264	-0.250	0.012
0.950	9.635	9.676	0.295	0.284	-0.225	-0.140
SECTION C						
0.000	9.376	9.376	0.356	0.356	-0.764	-0.764
0.025	9.076	10.135	0.418	0.118	-1.386	0.811
0.050	9.037	9.888	0.425	0.222	-1.466	0.298
0.075	9.026	9.864	0.428	0.230	-1.490	0.250
0.100	9.029	9.888	0.427	0.222	-1.484	0.300
0.150	9.010	9.873	0.431	0.227	-1.522	0.267
0.200	9.025	9.908	0.428	0.216	-1.493	0.340
0.300	9.050	9.931	0.423	0.208	-1.440	0.389
0.500	9.284	9.919	0.376	0.212	-0.954	0.364
0.700	9.495	9.859	0.329	0.231	-0.516	0.240
0.800	9.571	9.809	0.311	0.247	-0.359	0.136
0.850	9.591	9.771	0.306	0.258	-0.316	0.056
0.900	9.604	9.725	0.303	0.271	-0.291	-0.039
0.950	9.618	9.646	0.299	0.292	-0.262	-0.203
SECTION D						
0.000	9.493	9.493	0.330	0.330	-0.521	-0.521
0.025	9.353	10.149	0.361	0.109	-0.811	0.841
0.050	9.351	9.967	0.361	0.195	-0.815	0.463
0.075	9.348	9.944	0.362	0.203	-0.821	0.415
0.100	9.350	9.949	0.362	0.202	-0.818	0.425
0.150	9.347	9.953	0.362	0.200	-0.825	0.435
0.200	9.360	9.968	0.359	0.195	-0.797	0.464
0.300	9.373	9.983	0.357	0.189	-0.771	0.497
0.500	9.488	9.967	0.331	0.195	-0.532	0.464
0.700	9.597	9.909	0.304	0.215	-0.304	0.343
0.800	9.636	9.855	0.295	0.233	-0.224	0.230
0.850	9.655	9.818	0.290	0.244	-0.185	0.154
0.900	9.709	9.771	0.275	0.258	-0.072	0.055
0.950	9.678	9.687	0.284	0.281	-0.137	-0.117

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(d) Vane A in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 279–289

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.693	9.693	0.275	0.275	-0.300	-0.300
0.025	9.350	9.956	0.358	0.192	-1.164	0.363
0.050	9.305	9.759	0.367	0.256	-1.277	-0.132
0.075	9.242	9.751	0.381	0.258	-1.436	-0.154
0.100	9.196	9.781	0.390	0.249	-1.552	-0.077
0.150	9.107	9.799	0.408	0.244	-1.777	-0.032
0.200	9.086	9.824	0.412	0.236	-1.830	0.032
0.300	9.033	9.847	0.423	0.229	-1.963	0.090
0.500	9.190	9.830	0.391	0.234	-1.567	0.047
0.700	9.384	9.763	0.350	0.255	-1.077	-0.123
0.800	9.473	9.707	0.330	0.271	-0.855	-0.265
0.850	9.497	9.669	0.324	0.281	-0.793	-0.360
0.900	9.510	9.617	0.321	0.295	-0.762	-0.491
0.950	9.511	9.534	0.321	0.315	-0.759	-0.700

SECTION B

0.000	9.584	9.584	0.303	0.303	-0.574	-0.574
0.025	9.306	10.090	0.367	0.132	-1.276	0.701
0.050	9.303	9.927	0.368	0.202	-1.282	0.292
0.075	9.261	9.913	0.377	0.207	-1.388	0.256
0.100	9.256	9.922	0.378	0.204	-1.402	0.278
0.150	9.238	9.940	0.381	0.197	-1.447	0.324
0.200	9.253	9.954	0.378	0.192	-1.409	0.360
0.300	9.274	9.975	0.374	0.184	-1.356	0.412
0.500	9.472	9.968	0.330	0.187	-0.856	0.395
0.700	9.643	9.926	0.288	0.203	-0.425	0.288
0.800	9.698	9.887	0.273	0.216	-0.286	0.190
0.850	9.712	9.857	0.269	0.226	-0.252	0.115
0.900	9.719	9.822	0.267	0.237	-0.234	0.026
0.950	9.729	9.762	0.264	0.255	-0.208	-0.124

SECTION C

0.000	9.515	9.515	0.320	0.320	-0.749	-0.749
0.025	9.276	10.139	0.374	0.102	-1.352	0.827
0.050	9.245	9.939	0.380	0.198	-1.428	0.320
0.075	9.236	9.919	0.382	0.205	-1.453	0.271
0.100	9.238	9.937	0.381	0.198	-1.446	0.317
0.150	9.223	9.925	0.385	0.203	-1.485	0.287
0.200	9.234	9.952	0.382	0.193	-1.456	0.354
0.300	9.255	9.970	0.378	0.186	-1.405	0.399
0.500	9.447	9.961	0.336	0.190	-0.920	0.377
0.700	9.617	9.912	0.295	0.207	-0.491	0.254
0.800	9.678	9.871	0.279	0.221	-0.338	0.151
0.850	9.694	9.841	0.274	0.231	-0.296	0.073
0.900	9.700	9.803	0.272	0.243	-0.280	-0.021
0.950	9.715	9.763	0.268	0.261	-0.243	-0.181

SECTION D

0.000	9.610	9.610	0.296	0.296	-0.507	-0.507
0.025	9.497	10.145	0.324	0.098	-0.794	0.841
0.050	9.496	9.997	0.324	0.175	-0.797	0.469
0.075	9.493	9.978	0.325	0.183	-0.804	0.419
0.100	9.495	9.982	0.325	0.181	-0.798	0.430
0.150	9.491	9.986	0.326	0.180	-0.809	0.440
0.200	9.503	9.997	0.323	0.175	-0.779	0.467
0.300	9.513	10.009	0.320	0.170	-0.753	0.498
0.500	9.607	9.997	0.297	0.175	-0.516	0.467
0.700	9.697	9.949	0.273	0.194	-0.288	0.347
0.800	9.728	9.905	0.265	0.210	-0.210	0.236
0.850	9.744	9.876	0.260	0.220	-0.169	0.162
0.900	9.792	9.838	0.246	0.232	-0.050	0.067
0.950	9.762	9.770	0.255	0.253	-0.126	-0.105

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(e) Vane A in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 291–294

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.021	10.021	0.136	0.136	-0.260	-0.260
0.025	9.935	10.094	0.176	0.090	-1.089	0.446
0.050	9.926	10.046	0.180	0.123	-1.179	-0.021
0.075	9.911	10.044	0.185	0.124	-1.318	-0.039
0.100	9.901	10.049	0.189	0.120	-1.416	0.016
0.150	9.881	10.054	0.197	0.118	-1.608	0.060
0.200	9.876	10.058	0.199	0.115	-1.655	0.094
0.300	9.865	10.065	0.203	0.111	-1.762	0.168
0.500	9.901	10.061	0.189	0.114	-1.415	0.124
0.700	9.953	10.044	0.168	0.124	-0.912	-0.036
0.800	9.976	10.031	0.158	0.131	-0.696	-0.158
0.850	9.981	10.022	0.156	0.136	-0.645	-0.247
0.900	9.985	10.009	0.154	0.142	-0.610	-0.370
0.950	9.985	9.991	0.154	0.151	-0.609	-0.548

SECTION B

0.000	9.997	9.997	0.148	0.148	-0.486	-0.486
0.025	9.933	10.124	0.177	0.062	-1.110	0.738
0.050	9.931	10.086	0.178	0.097	-1.132	0.365
0.075	9.921	10.082	0.181	0.100	-1.220	0.326
0.100	9.920	10.083	0.182	0.098	-1.234	0.342
0.150	9.916	10.087	0.184	0.096	-1.276	0.380
0.200	9.919	10.090	0.182	0.093	-1.243	0.408
0.300	9.925	10.091	0.180	0.092	-1.181	0.421
0.500	9.971	10.093	0.161	0.091	-0.745	0.435
0.700	10.014	10.082	0.140	0.099	-0.328	0.335
0.800	10.024	10.073	0.135	0.105	-0.232	0.245
0.850	10.030	10.065	0.131	0.110	-0.172	0.171
0.900	10.032	10.058	0.130	0.115	-0.149	0.096
0.950	10.034	10.042	0.129	0.125	-0.129	-0.056

SECTION C

0.000	9.979	9.979	0.157	0.157	-0.664	-0.664
0.025	9.924	10.136	0.180	0.047	-1.196	0.854
0.050	9.916	10.087	0.183	0.095	-1.272	0.381
0.075	9.913	10.083	0.185	0.099	-1.299	0.336
0.100	9.913	10.086	0.185	0.096	-1.298	0.370
0.150	9.911	10.083	0.186	0.098	-1.330	0.342
0.200	9.912	10.089	0.185	0.094	-1.308	0.403
0.300	9.917	10.092	0.183	0.092	-1.262	0.431
0.500	9.961	10.090	0.165	0.093	-0.833	0.411
0.700	10.008	10.079	0.143	0.101	-0.388	0.304
0.800	10.022	10.069	0.136	0.108	-0.250	0.208
0.850	10.026	10.062	0.134	0.113	-0.212	0.133
0.900	10.028	10.053	0.132	0.118	-0.188	0.047
0.950	10.031	10.037	0.131	0.127	-0.163	-0.103

SECTION D

0.000	10.006	10.006	0.144	0.144	-0.400	-0.400
0.025	9.979	10.134	0.157	0.050	-0.663	0.834
0.050	9.972	10.098	0.160	0.087	-0.736	0.483
0.075	9.977	10.093	0.158	0.091	-0.685	0.440
0.100	9.976	10.093	0.158	0.091	-0.690	0.441
0.150	9.975	10.095	0.159	0.089	-0.705	0.456
0.200	9.977	10.097	0.158	0.088	-0.687	0.479
0.300	9.979	10.100	0.157	0.085	-0.666	0.506
0.500	10.003	10.097	0.146	0.088	-0.436	0.480
0.700	10.025	10.087	0.134	0.096	-0.222	0.375
0.800	10.033	10.076	0.130	0.104	-0.145	0.271
0.850	10.036	10.068	0.128	0.109	-0.110	0.195
0.900	10.051	10.059	0.119	0.115	0.031	0.106
0.950	10.041	10.042	0.125	0.124	-0.068	-0.053

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(f) Vane A in corner 2; IGV setting, 10°; airflow, 68.41 kg/sec; readings 280–288

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.692	9.692	0.275	0.275	-0.328	-0.328
0.025	9.351	9.957	0.357	0.191	-1.206	0.356
0.050	9.306	9.759	0.367	0.256	-1.321	-0.155
0.075	9.242	9.750	0.380	0.258	-1.486	-0.177
0.100	9.196	9.781	0.390	0.249	-1.604	-0.099
0.150	9.107	9.799	0.408	0.244	-1.835	-0.052
0.200	9.086	9.825	0.412	0.236	-1.888	0.015
0.300	9.034	9.847	0.422	0.229	-2.023	0.072
0.500	9.190	9.830	0.391	0.234	-1.621	0.029
0.700	9.384	9.763	0.350	0.255	-1.120	-0.146
0.800	9.473	9.706	0.330	0.271	-0.892	-0.292
0.850	9.497	9.669	0.324	0.281	-0.830	-0.387
0.900	9.509	9.616	0.321	0.294	-0.799	-0.522
0.950	9.511	9.534	0.321	0.315	-0.795	-0.735
SECTION B						
0.000	9.585	9.585	0.302	0.302	-0.603	-0.603
0.025	9.305	10.089	0.367	0.132	-1.323	0.696
0.050	9.303	9.927	0.367	0.202	-1.329	0.277
0.075	9.261	9.913	0.376	0.207	-1.437	0.242
0.100	9.255	9.922	0.378	0.204	-1.452	0.265
0.150	9.238	9.939	0.381	0.197	-1.498	0.310
0.200	9.253	9.954	0.378	0.192	-1.459	0.346
0.300	9.274	9.974	0.374	0.184	-1.404	0.400
0.500	9.471	9.968	0.330	0.186	-0.896	0.384
0.700	9.643	9.925	0.288	0.202	-0.454	0.274
0.800	9.698	9.887	0.273	0.216	-0.311	0.175
0.850	9.711	9.857	0.269	0.226	-0.278	0.097
0.900	9.718	9.822	0.267	0.237	-0.259	0.007
0.950	9.729	9.762	0.264	0.255	-0.232	-0.147
SECTION C						
0.000	9.515	9.515	0.320	0.320	-0.784	-0.784
0.025	9.275	10.139	0.373	0.101	-1.401	0.825
0.050	9.245	9.939	0.380	0.198	-1.480	0.308
0.075	9.235	9.919	0.382	0.205	-1.505	0.257
0.100	9.237	9.937	0.381	0.198	-1.499	0.305
0.150	9.222	9.925	0.385	0.202	-1.538	0.273
0.200	9.234	9.953	0.382	0.192	-1.508	0.344
0.300	9.254	9.971	0.378	0.185	-1.457	0.390
0.500	9.446	9.961	0.336	0.189	-0.962	0.367
0.700	9.616	9.912	0.294	0.207	-0.522	0.240
0.800	9.677	9.872	0.279	0.221	-0.367	0.135
0.850	9.694	9.840	0.274	0.231	-0.322	0.055
0.900	9.700	9.803	0.272	0.242	-0.307	-0.041
0.950	9.715	9.739	0.268	0.261	-0.267	-0.205
SECTION D						
0.000	9.608	9.608	0.297	0.297	-0.544	-0.544
0.025	9.491	10.146	0.325	0.097	-0.846	0.842
0.050	9.490	9.998	0.325	0.175	-0.848	0.461
0.075	9.487	9.978	0.326	0.183	-0.855	0.409
0.100	9.489	9.982	0.326	0.181	-0.850	0.420
0.150	9.485	9.986	0.327	0.179	-0.861	0.430
0.200	9.497	9.997	0.324	0.175	-0.829	0.458
0.300	9.508	10.009	0.321	0.170	-0.802	0.488
0.500	9.604	9.997	0.298	0.175	-0.554	0.458
0.700	9.695	9.949	0.274	0.194	-0.319	0.334
0.800	9.726	9.905	0.265	0.209	-0.239	0.222
0.850	9.744	9.875	0.260	0.220	-0.194	0.144
0.900	9.791	9.837	0.246	0.232	-0.072	0.047
0.950	9.761	9.769	0.255	0.253	-0.151	-0.129

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(g) Vane A2 in corner 2; IGV setting, 0°; airflow, 82.13 kg/sec; readings 307–310

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.712	9.712	0.273	0.273	0.098	0.098
0.025	9.275	9.760	0.377	0.260	-0.680	0.183
0.050	9.198	9.552	0.393	0.314	-0.817	-0.186
0.075	9.099	9.586	0.412	0.306	-0.994	-0.127
0.100	9.028	9.645	0.426	0.291	-1.121	-0.020
0.150	8.903	9.690	0.450	0.279	-1.344	0.059
0.200	8.875	9.729	0.455	0.269	-1.393	0.128
0.300	8.837	9.772	0.462	0.257	-1.462	0.205
0.500	9.086	9.773	0.415	0.256	-1.017	0.207
0.700	9.329	9.717	0.365	0.272	-0.585	0.107
0.800	9.425	9.666	0.344	0.286	-0.413	0.016
0.850	9.452	9.628	0.338	0.295	-0.365	-0.051
0.900	9.469	9.577	0.334	0.308	-0.335	-0.142
0.950	9.471	9.494	0.334	0.328	-0.331	-0.290

SECTION B

0.000	9.645	9.645	0.291	0.291	-0.020	-0.020
0.025	9.099	9.585	0.412	0.306	-0.994	-0.127
0.050	9.044	9.562	0.423	0.312	-1.093	-0.169
0.075	8.928	9.633	0.445	0.294	-1.300	-0.043
0.100	8.882	9.685	0.454	0.281	-1.381	0.049
0.150	8.810	9.778	0.467	0.255	-1.510	0.215
0.200	8.820	9.819	0.465	0.243	-1.491	0.289
0.300	8.877	9.865	0.455	0.228	-1.391	0.371
0.500	9.232	9.880	0.386	0.223	-0.758	0.398
0.700	9.486	9.842	0.330	0.235	-0.305	0.331
0.800	9.560	9.800	0.313	0.248	-0.173	0.255
0.850	9.577	9.765	0.308	0.258	-0.142	0.193
0.900	9.586	9.723	0.306	0.270	-0.125	0.118
0.950	9.598	9.653	0.303	0.289	-0.104	-0.007

SECTION C

0.000	9.532	9.533	0.319	0.319	-0.222	-0.221
0.025	9.049	9.748	0.422	0.263	-1.083	0.162
0.050	8.942	9.582	0.443	0.307	-1.274	-0.134
0.075	8.885	9.648	0.453	0.290	-1.377	-0.016
0.100	8.858	9.696	0.458	0.278	-1.424	0.070
0.150	8.796	9.760	0.469	0.260	-1.535	0.184
0.200	8.804	9.818	0.468	0.243	-1.520	0.287
0.300	8.848	9.860	0.460	0.230	-1.443	0.363
0.500	9.188	9.867	0.395	0.228	-0.836	0.374
0.700	9.446	9.822	0.339	0.242	-0.377	0.295
0.800	9.529	9.777	0.320	0.255	-0.228	0.214
0.850	9.552	9.741	0.314	0.265	-0.187	0.150
0.900	9.566	9.696	0.311	0.278	-0.162	0.070
0.950	9.581	9.618	0.307	0.298	-0.136	-0.070

SECTION D

0.000	9.516	9.516	0.323	0.323	-0.251	-0.251
0.025	9.182	9.637	0.396	0.293	-0.846	-0.036
0.050	9.051	9.553	0.422	0.314	-1.080	-0.184
0.075	8.988	9.632	0.434	0.294	-1.192	-0.044
0.100	8.946	9.686	0.442	0.280	-1.267	0.053
0.150	8.885	9.768	0.453	0.258	-1.375	0.198
0.200	8.893	9.815	0.452	0.244	-1.362	0.282
0.300	8.935	9.859	0.444	0.230	-1.287	0.360
0.500	9.211	9.866	0.390	0.228	-0.796	0.373
0.700	9.412	9.812	0.347	0.245	-0.436	0.277
0.800	9.471	9.752	0.334	0.262	-0.331	0.170
0.850	9.498	9.712	0.327	0.273	-0.283	0.098
0.900	9.511	9.655	0.324	0.289	-0.260	-0.004
0.950	9.521	9.558	0.322	0.313	-0.241	-0.176

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(h) Vane A2 in corner 2; IGV setting, 0°; airflow, 76.09 kg/sec; readings 303-306

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.757	9.756	0.257	0.257	0.062	0.062
0.025	9.377	9.811	0.352	0.241	-0.726	0.176
0.050	9.311	9.629	0.367	0.292	-0.864	-0.204
0.075	9.227	9.658	0.384	0.285	-1.037	-0.143
0.100	9.166	9.708	0.397	0.271	-1.165	-0.039
0.150	9.059	9.748	0.418	0.260	-1.386	0.045
0.200	9.035	9.782	0.423	0.250	-1.436	0.114
0.300	9.003	9.818	0.429	0.239	-1.503	0.190
0.500	9.219	9.819	0.386	0.239	-1.054	0.191
0.700	9.431	9.772	0.340	0.253	-0.613	0.093
0.800	9.516	9.726	0.320	0.266	-0.438	-0.001
0.850	9.540	9.693	0.314	0.275	-0.388	-0.069
0.900	9.555	9.649	0.311	0.287	-0.357	-0.161
0.950	9.557	9.576	0.310	0.305	-0.352	-0.312
SECTION B						
0.000	9.703	9.703	0.272	0.272	-0.048	-0.049
0.025	9.228	9.660	0.384	0.284	-1.036	-0.138
0.050	9.179	9.638	0.394	0.290	-1.137	-0.185
0.075	9.078	9.698	0.414	0.274	-1.347	-0.059
0.100	9.037	9.744	0.422	0.261	-1.433	0.036
0.150	8.976	9.822	0.434	0.238	-1.559	0.197
0.200	8.985	9.859	0.432	0.226	-1.540	0.276
0.300	9.032	9.898	0.423	0.213	-1.442	0.357
0.500	9.343	9.912	0.360	0.208	-0.797	0.386
0.700	9.565	9.878	0.308	0.220	-0.335	0.315
0.800	9.631	9.841	0.292	0.232	-0.198	0.237
0.850	9.646	9.810	0.288	0.242	-0.167	0.173
0.900	9.654	9.774	0.286	0.252	-0.150	0.098
0.950	9.665	9.712	0.283	0.270	-0.127	-0.031
SECTION C						
0.000	9.600	9.600	0.300	0.300	-0.264	-0.263
0.025	9.185	9.800	0.393	0.245	-1.125	0.152
0.050	9.092	9.656	0.412	0.285	-1.319	-0.146
0.075	9.042	9.712	0.421	0.270	-1.422	-0.031
0.100	9.019	9.779	0.426	0.251	-1.471	0.110
0.150	8.965	9.782	0.436	0.250	-1.583	0.115
0.200	8.971	9.859	0.435	0.226	-1.569	0.275
0.300	9.011	9.896	0.427	0.214	-1.486	0.351
0.500	9.311	9.901	0.367	0.212	-0.863	0.362
0.700	9.532	9.861	0.316	0.225	-0.404	0.279
0.800	9.605	9.822	0.298	0.238	-0.252	0.198
0.850	9.625	9.790	0.293	0.248	-0.210	0.132
0.900	9.637	9.751	0.290	0.259	-0.186	0.050
0.950	9.650	9.683	0.287	0.278	-0.160	-0.090
SECTION D						
0.000	9.585	9.586	0.303	0.303	-0.293	-0.292
0.025	9.280	9.708	0.373	0.271	-0.928	-0.038
0.050	9.188	9.632	0.392	0.291	-1.119	-0.197
0.075	9.131	9.698	0.404	0.274	-1.237	-0.059
0.100	9.094	9.744	0.411	0.261	-1.313	0.037
0.150	9.042	9.814	0.421	0.240	-1.423	0.182
0.200	9.046	9.856	0.421	0.227	-1.413	0.268
0.300	9.085	9.894	0.413	0.215	-1.332	0.348
0.500	9.326	9.900	0.363	0.213	-0.833	0.360
0.700	9.504	9.853	0.323	0.228	-0.462	0.263
0.800	9.556	9.801	0.310	0.244	-0.354	0.155
0.850	9.578	9.764	0.305	0.255	-0.308	0.078
0.900	9.609	9.717	0.297	0.269	-0.244	-0.021
0.950	9.598	9.632	0.300	0.291	-0.267	-0.196

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(i) Vane A2 in corner 2; IGV setting, 0°; airflow, 69.14 kg/sec; readings 311–314

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.823	9.824	0.233	0.233	0.062	0.063
0.025	9.515	9.882	0.317	0.213	-0.714	0.212
0.050	9.462	9.729	0.330	0.261	-0.849	-0.175
0.075	9.393	9.753	0.345	0.254	-1.022	-0.114
0.100	9.344	9.792	0.356	0.242	-1.146	-0.015
0.150	9.260	9.815	0.374	0.235	-1.358	0.042
0.200	9.240	9.852	0.379	0.224	-1.408	0.134
0.300	9.215	9.881	0.384	0.214	-1.471	0.208
0.500	9.392	9.880	0.345	0.214	-1.024	0.206
0.700	9.565	9.841	0.305	0.227	-0.588	0.107
0.800	9.634	9.805	0.287	0.238	-0.414	0.017
0.850	9.654	9.779	0.282	0.246	-0.364	-0.049
0.900	9.667	9.743	0.278	0.257	-0.332	-0.141
0.950	9.668	9.684	0.278	0.274	-0.330	-0.288
SECTION B						
0.000	9.776	9.776	0.247	0.247	-0.058	-0.058
0.025	9.396	9.752	0.345	0.254	-1.015	-0.118
0.050	9.356	9.735	0.354	0.259	-1.116	-0.160
0.075	9.276	9.783	0.371	0.245	-1.318	-0.039
0.100	9.243	9.819	0.378	0.234	-1.400	0.051
0.150	9.193	9.879	0.388	0.215	-1.527	0.203
0.200	9.200	9.911	0.387	0.203	-1.508	0.285
0.300	9.235	9.943	0.380	0.192	-1.420	0.365
0.500	9.491	9.953	0.323	0.188	-0.776	0.389
0.700	9.673	9.925	0.277	0.198	-0.317	0.320
0.800	9.726	9.896	0.262	0.209	-0.182	0.246
0.850	9.738	9.871	0.258	0.217	-0.152	0.183
0.900	9.744	9.842	0.257	0.227	-0.137	0.110
0.950	9.753	9.792	0.254	0.243	-0.115	-0.017
SECTION C						
0.000	9.695	9.695	0.271	0.271	-0.261	-0.261
0.025	9.360	9.862	0.353	0.220	-1.106	0.161
0.050	9.285	9.747	0.369	0.256	-1.294	-0.131
0.075	9.243	9.792	0.378	0.242	-1.400	-0.017
0.100	9.224	9.825	0.382	0.232	-1.449	0.068
0.150	9.180	9.869	0.391	0.218	-1.559	0.177
0.200	9.185	9.908	0.390	0.205	-1.548	0.275
0.300	9.216	9.940	0.384	0.193	-1.468	0.356
0.500	9.465	9.944	0.329	0.191	-0.841	0.367
0.700	9.644	9.912	0.284	0.203	-0.389	0.286
0.800	9.703	9.880	0.268	0.214	-0.240	0.206
0.850	9.720	9.854	0.264	0.223	-0.198	0.140
0.900	9.729	9.822	0.261	0.233	-0.174	0.060
0.950	9.741	9.767	0.258	0.250	-0.146	-0.078
SECTION D						
0.000	9.646	9.645	0.284	0.284	-0.385	-0.387
0.025	9.469	9.771	0.328	0.249	-0.831	-0.070
0.050	9.383	9.716	0.348	0.265	-1.048	-0.208
0.075	9.344	9.772	0.356	0.249	-1.145	-0.067
0.100	9.319	9.810	0.362	0.237	-1.210	0.029
0.150	9.277	9.860	0.371	0.221	-1.315	0.154
0.200	9.279	9.894	0.370	0.210	-1.309	0.239
0.300	9.306	9.922	0.365	0.199	-1.242	0.312
0.500	9.485	9.929	0.324	0.197	-0.790	0.328
0.700	9.621	9.894	0.290	0.209	-0.446	0.240
0.800	9.662	9.853	0.279	0.223	-0.343	0.137
0.850	9.678	9.825	0.275	0.232	-0.303	0.068
0.900	9.687	9.788	0.273	0.244	-0.282	-0.026
0.950	9.694	9.723	0.271	0.263	-0.262	-0.191

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(j) Vane A2 in corner 2; IGV setting, 0°; airflow, 35.45 kg/sec; readings 315–318

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.052	10.052	0.117	0.117	0.074	0.073
0.025	9.978	10.080	0.156	0.098	-0.647	0.341
0.050	9.966	10.040	0.161	0.124	-0.765	-0.042
0.075	9.951	10.045	0.168	0.121	-0.910	0.005
0.100	9.941	10.053	0.172	0.116	-1.007	0.078
0.150	9.922	10.060	0.180	0.112	-1.190	0.149
0.200	9.916	10.066	0.182	0.108	-1.245	0.207
0.300	9.911	10.073	0.184	0.103	-1.288	0.273
0.500	9.953	10.072	0.167	0.104	-0.885	0.265
0.700	9.997	10.063	0.147	0.110	-0.462	0.175
0.800	10.011	10.055	0.140	0.115	-0.329	0.104
0.850	10.019	10.048	0.136	0.119	-0.253	0.032
0.900	10.021	10.040	0.134	0.124	-0.224	-0.047
0.950	10.021	10.026	0.134	0.132	-0.225	-0.182

SECTION B

0.000	10.044	10.044	0.122	0.122	-0.006	-0.011
0.025	9.954	10.046	0.167	0.121	-0.879	0.011
0.050	9.942	10.041	0.171	0.124	-0.988	-0.039
0.075	9.925	10.052	0.179	0.117	-1.161	0.068
0.100	9.917	10.059	0.182	0.112	-1.231	0.141
0.150	9.907	10.069	0.186	0.106	-1.335	0.237
0.200	9.905	10.078	0.187	0.100	-1.352	0.324
0.300	9.918	10.087	0.182	0.093	-1.228	0.413
0.500	9.977	10.089	0.156	0.092	-0.652	0.425
0.700	10.021	10.082	0.134	0.097	-0.225	0.365
0.800	10.033	10.075	0.128	0.102	-0.109	0.291
0.850	10.036	10.069	0.126	0.106	-0.082	0.236
0.900	10.038	10.062	0.125	0.110	-0.064	0.172
0.950	10.040	10.050	0.124	0.118	-0.047	0.051

SECTION C

0.000	10.023	10.023	0.133	0.134	-0.210	-0.214
0.025	9.944	10.068	0.171	0.107	-0.978	0.222
0.050	9.925	10.040	0.179	0.124	-1.158	-0.050
0.075	9.915	10.051	0.183	0.118	-1.257	0.057
0.100	9.910	10.059	0.185	0.113	-1.304	0.137
0.150	9.899	10.068	0.189	0.107	-1.408	0.227
0.200	9.899	10.075	0.189	0.102	-1.407	0.294
0.300	9.908	10.086	0.186	0.094	-1.326	0.399
0.500	9.973	10.086	0.158	0.094	-0.695	0.402
0.700	10.013	10.078	0.139	0.099	-0.306	0.327
0.800	10.028	10.071	0.131	0.105	-0.164	0.253
0.850	10.032	10.064	0.129	0.109	-0.123	0.191
0.900	10.034	10.057	0.127	0.114	-0.103	0.117
0.950	10.037	10.043	0.126	0.122	-0.074	-0.012

SECTION D

0.000	10.020	10.020	0.135	0.135	-0.241	-0.235
0.025	9.971	10.045	0.159	0.121	-0.711	0.006
0.050	9.942	10.031	0.172	0.129	-0.991	-0.133
0.075	9.930	10.045	0.177	0.121	-1.111	-0.002
0.100	9.922	10.053	0.180	0.116	-1.183	0.083
0.150	9.910	10.065	0.184	0.108	-1.298	0.200
0.200	9.910	10.075	0.185	0.102	-1.304	0.294
0.300	9.916	10.082	0.182	0.097	-1.243	0.363
0.500	9.968	10.084	0.160	0.096	-0.742	0.379
0.700	10.005	10.074	0.143	0.102	-0.385	0.288
0.800	10.016	10.064	0.137	0.109	-0.274	0.185
0.850	10.019	10.058	0.135	0.113	-0.246	0.125
0.900	10.022	10.048	0.134	0.119	-0.217	0.035
0.950	10.024	10.032	0.133	0.129	-0.198	-0.125

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(k) Vane A3 in corner 2; IGV setting, 0°; airflow, 76.16 kg/sec; readings 327–330

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.706	9.706	0.276	0.276	-0.077	-0.077
0.025	9.331	10.135	0.365	0.117	-0.857	0.816
0.050	9.300	9.904	0.372	0.216	-0.920	0.334
0.075	9.252	9.871	0.382	0.227	-1.020	0.266
0.100	9.224	9.880	0.388	0.224	-1.078	0.286
0.150	9.167	9.886	0.399	0.222	-1.198	0.297
0.200	9.165	9.898	0.400	0.218	-1.202	0.322
0.300	9.123	9.909	0.408	0.215	-1.289	0.345
0.500	9.216	9.894	0.389	0.220	-1.095	0.314
0.700	9.393	9.810	0.352	0.246	-0.728	0.140
0.800	9.472	9.743	0.334	0.266	-0.563	0.000
0.850	9.493	9.696	0.329	0.278	-0.520	-0.097
0.900	9.502	9.638	0.327	0.294	-0.501	-0.219
0.950	9.489	9.547	0.330	0.316	-0.527	-0.407

SECTION B

0.000	9.475	9.474	0.333	0.333	-0.558	-0.559
0.025	9.120	10.026	0.409	0.171	-1.296	0.590
0.050	9.071	9.845	0.418	0.235	-1.396	0.213
0.075	9.048	9.837	0.423	0.238	-1.445	0.196
0.100	9.043	9.853	0.424	0.233	-1.456	0.230
0.150	9.015	9.881	0.429	0.224	-1.514	0.288
0.200	9.034	9.902	0.426	0.217	-1.474	0.331
0.300	9.061	9.929	0.420	0.208	-1.419	0.386
0.500	9.315	9.926	0.369	0.209	-0.890	0.381
0.700	9.533	9.875	0.320	0.226	-0.437	0.276
0.800	9.601	9.829	0.303	0.240	-0.294	0.180
0.850	9.617	9.793	0.299	0.251	-0.261	0.105
0.900	9.625	9.750	0.297	0.263	-0.244	0.016
0.950	9.637	9.680	0.294	0.283	-0.219	-0.131

SECTION C

0.000	9.385	9.386	0.353	0.353	-0.743	-0.742
0.025	9.082	10.108	0.416	0.132	-1.373	0.759
0.050	9.039	9.867	0.425	0.228	-1.464	0.259
0.075	9.028	9.852	0.427	0.233	-1.487	0.227
0.100	9.030	9.864	0.426	0.230	-1.482	0.251
0.150	9.010	9.882	0.430	0.223	-1.524	0.290
0.200	9.023	9.903	0.428	0.217	-1.497	0.334
0.300	9.051	9.929	0.422	0.208	-1.438	0.388
0.500	9.289	9.918	0.374	0.212	-0.945	0.364
0.700	9.503	9.861	0.327	0.230	-0.499	0.246
0.800	9.577	9.813	0.309	0.245	-0.344	0.146
0.850	9.599	9.776	0.304	0.256	-0.300	0.070
0.900	9.611	9.732	0.300	0.269	-0.273	-0.023
0.950	9.625	9.654	0.297	0.289	-0.245	-0.184

SECTION D

0.000	9.542	9.543	0.317	0.317	-0.416	-0.416
0.025	9.426	10.161	0.344	0.100	-0.660	0.870
0.050	9.379	9.970	0.355	0.193	-0.757	0.472
0.075	9.371	9.947	0.357	0.201	-0.772	0.425
0.100	9.374	9.953	0.356	0.199	-0.767	0.438
0.150	9.369	9.959	0.357	0.197	-0.778	0.450
0.200	9.383	9.972	0.354	0.192	-0.748	0.477
0.300	9.395	9.987	0.351	0.186	-0.723	0.508
0.500	9.504	9.973	0.326	0.192	-0.496	0.479
0.700	9.606	9.915	0.302	0.213	-0.283	0.358
0.800	9.648	9.861	0.291	0.230	-0.198	0.246
0.850	9.659	9.826	0.288	0.241	-0.174	0.172
0.900	9.668	9.779	0.286	0.255	-0.154	0.075
0.950	9.678	9.691	0.283	0.280	-0.135	-0.107

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(l) Vane A3 in corner 2; IGV setting, 0°; airflow, 69.19 kg/sec; readings 323–326

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.770	9.770	0.252	0.253	-0.104	-0.104
0.025	9.462	10.143	0.332	0.099	-0.882	0.837
0.050	9.438	9.953	0.338	0.192	-0.942	0.359
0.075	9.400	9.925	0.346	0.203	-1.038	0.287
0.100	9.378	9.931	0.351	0.200	-1.092	0.303
0.150	9.333	9.935	0.361	0.199	-1.207	0.313
0.200	9.333	9.944	0.361	0.196	-1.206	0.336
0.300	9.300	9.952	0.368	0.193	-1.290	0.355
0.500	9.382	9.940	0.350	0.197	-1.084	0.324
0.700	9.532	9.871	0.316	0.221	-0.706	0.150
0.800	9.597	9.817	0.299	0.238	-0.539	0.015
0.850	9.614	9.779	0.295	0.250	-0.497	-0.081
0.900	9.618	9.731	0.294	0.264	-0.487	-0.201
0.950	9.611	9.659	0.296	0.284	-0.505	-0.385

SECTION B

0.000	9.587	9.587	0.302	0.302	-0.565	-0.565
0.025	9.303	10.050	0.368	0.152	-1.284	0.602
0.050	9.264	9.901	0.376	0.211	-1.382	0.227
0.075	9.247	9.894	0.379	0.214	-1.424	0.208
0.100	9.241	9.906	0.381	0.209	-1.439	0.241
0.150	9.219	9.928	0.385	0.201	-1.494	0.296
0.200	9.234	9.945	0.382	0.195	-1.457	0.338
0.300	9.258	9.969	0.377	0.186	-1.397	0.397
0.500	9.468	9.964	0.331	0.188	-0.867	0.386
0.700	9.643	9.920	0.288	0.205	-0.424	0.273
0.800	9.700	9.885	0.272	0.216	-0.281	0.187
0.850	9.713	9.855	0.269	0.226	-0.248	0.112
0.900	9.719	9.821	0.267	0.237	-0.231	0.026
0.950	9.730	9.764	0.264	0.254	-0.206	-0.119

SECTION C

0.000	9.514	9.515	0.320	0.320	-0.749	-0.748
0.025	9.271	10.113	0.374	0.119	-1.363	0.761
0.050	9.240	9.915	0.381	0.206	-1.441	0.261
0.075	9.229	9.902	0.383	0.211	-1.470	0.228
0.100	9.230	9.913	0.383	0.207	-1.467	0.258
0.150	9.212	9.929	0.387	0.201	-1.511	0.297
0.200	9.224	9.945	0.384	0.195	-1.482	0.338
0.300	9.246	9.966	0.380	0.187	-1.425	0.392
0.500	9.445	9.957	0.336	0.191	-0.925	0.369
0.700	9.619	9.911	0.294	0.207	-0.485	0.253
0.800	9.680	9.872	0.278	0.221	-0.330	0.154
0.850	9.695	9.842	0.274	0.230	-0.294	0.079
0.900	9.708	9.806	0.270	0.242	-0.260	-0.014
0.950	9.719	9.743	0.267	0.260	-0.232	-0.171

SECTION D

0.000	9.644	9.644	0.287	0.287	-0.423	-0.423
0.025	9.556	10.156	0.310	0.089	-0.645	0.871
0.050	9.513	9.999	0.320	0.174	-0.752	0.474
0.075	9.507	9.980	0.322	0.182	-0.768	0.427
0.100	9.511	9.985	0.321	0.180	-0.761	0.438
0.150	9.506	9.989	0.322	0.178	-0.770	0.449
0.200	9.517	9.999	0.319	0.174	-0.743	0.475
0.300	9.524	10.011	0.317	0.169	-0.724	0.506
0.500	9.617	10.001	0.294	0.174	-0.490	0.478
0.700	9.702	9.953	0.272	0.192	-0.276	0.358
0.800	9.736	9.909	0.262	0.208	-0.191	0.247
0.850	9.745	9.881	0.260	0.218	-0.166	0.175
0.900	9.752	9.842	0.258	0.231	-0.149	0.077
0.950	9.761	9.771	0.255	0.252	-0.127	-0.100

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(m) Vane A3 in corner 2; IGV setting, 0°; airflow, 35.51 kg/sec; readings 319–322

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.034	10.034	0.129	0.129	-0.132	-0.127
0.025	9.959	10.139	0.166	0.042	-0.854	0.884
0.050	9.954	10.090	0.168	0.093	-0.899	0.410
0.075	9.946	10.084	0.171	0.098	-0.976	0.354
0.100	9.942	10.085	0.173	0.097	-1.019	0.359
0.150	9.932	10.086	0.177	0.096	-1.113	0.373
0.200	9.933	10.088	0.177	0.095	-1.106	0.386
0.300	9.927	10.090	0.179	0.094	-1.168	0.404
0.500	9.941	10.086	0.173	0.096	-1.023	0.375
0.700	9.988	10.071	0.153	0.107	-0.575	0.224
0.800	10.004	10.058	0.145	0.115	-0.425	0.096
0.850	10.008	10.048	0.143	0.121	-0.385	0.002
0.900	10.009	10.037	0.142	0.128	-0.375	-0.104
0.950	10.007	10.019	0.143	0.137	-0.393	-0.273
SECTION B						
0.000	9.996	9.996	0.149	0.149	-0.499	-0.499
0.025	9.930	10.111	0.178	0.076	-1.135	0.611
0.050	9.920	10.079	0.182	0.101	-1.227	0.303
0.075	9.917	10.076	0.183	0.103	-1.263	0.276
0.100	9.915	10.079	0.184	0.101	-1.283	0.307
0.150	9.910	10.084	0.186	0.098	-1.327	0.349
0.200	9.914	10.087	0.184	0.096	-1.292	0.380
0.300	9.921	10.092	0.181	0.092	-1.218	0.427
0.500	9.973	10.091	0.159	0.092	-0.717	0.421
0.700	10.014	10.081	0.140	0.100	-0.321	0.323
0.800	10.027	10.072	0.133	0.106	-0.197	0.240
0.850	10.030	10.065	0.131	0.111	-0.165	0.169
0.900	10.032	10.057	0.131	0.116	-0.155	0.095
0.950	10.034	10.043	0.129	0.124	-0.127	-0.043
SECTION C						
0.000	9.977	9.977	0.158	0.158	-0.682	-0.683
0.025	9.921	10.130	0.182	0.056	-1.221	0.791
0.050	9.913	10.082	0.185	0.099	-1.296	0.330
0.075	9.910	10.078	0.186	0.102	-1.323	0.292
0.100	9.910	10.080	0.186	0.100	-1.327	0.315
0.150	9.906	10.084	0.187	0.098	-1.365	0.346
0.200	9.908	10.088	0.187	0.095	-1.344	0.384
0.300	9.914	10.092	0.184	0.092	-1.287	0.424
0.500	9.963	10.089	0.164	0.094	-0.814	0.401
0.700	10.007	10.079	0.143	0.101	-0.387	0.302
0.800	10.023	10.069	0.135	0.108	-0.239	0.210
0.850	10.027	10.062	0.133	0.113	-0.200	0.139
0.900	10.029	10.053	0.132	0.118	-0.180	0.054
0.950	10.032	10.038	0.131	0.127	-0.155	-0.091
SECTION D						
0.000	10.012	10.012	0.141	0.141	-0.345	-0.340
0.025	9.996	10.137	0.149	0.045	-0.495	0.862
0.050	9.981	10.098	0.156	0.087	-0.646	0.484
0.075	9.978	10.093	0.157	0.091	-0.667	0.440
0.100	9.979	10.095	0.157	0.090	-0.663	0.453
0.150	9.977	10.095	0.158	0.090	-0.684	0.452
0.200	9.978	10.098	0.157	0.087	-0.667	0.488
0.300	9.981	10.101	0.156	0.085	-0.640	0.512
0.500	10.004	10.098	0.145	0.087	-0.418	0.488
0.700	10.026	10.087	0.133	0.096	-0.206	0.381
0.800	10.035	10.076	0.129	0.103	-0.126	0.275
0.850	10.037	10.070	0.128	0.108	-0.105	0.213
0.900	10.038	10.060	0.127	0.114	-0.093	0.120
0.950	10.041	10.044	0.125	0.124	-0.067	-0.040

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(n) Vane A4 in corner 2; IGV setting, 0°; airflow, 76.29 kg/sec; readings 331-334

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.897	9.897	0.212	0.213	0.364	0.363
0.025	9.518	9.905	0.319	0.210	-0.420	0.379
0.050	9.458	9.713	0.333	0.269	-0.546	-0.017
0.075	9.384	9.762	0.350	0.255	-0.698	0.085
0.100	9.336	9.802	0.360	0.243	-0.797	0.168
0.150	9.250	9.831	0.379	0.234	-0.976	0.228
0.200	9.237	9.861	0.382	0.224	-1.003	0.289
0.300	9.219	9.894	0.385	0.214	-1.038	0.356
0.500	9.386	9.910	0.349	0.208	-0.694	0.391
0.700	9.560	9.867	0.309	0.222	-0.335	0.301
0.800	9.625	9.826	0.292	0.236	-0.199	0.217
0.850	9.643	9.796	0.288	0.245	-0.162	0.154
0.900	9.651	9.756	0.285	0.257	-0.145	0.071
0.950	9.640	9.693	0.288	0.274	-0.168	-0.058
SECTION B						
0.000	9.747	9.746	0.259	0.259	0.052	0.052
0.025	9.258	9.637	0.377	0.289	-0.960	-0.174
0.050	9.153	9.631	0.399	0.291	-1.176	-0.188
0.075	9.096	9.694	0.410	0.274	-1.295	-0.056
0.100	9.055	9.741	0.418	0.261	-1.378	0.042
0.150	8.989	9.823	0.431	0.236	-1.515	0.211
0.200	8.997	9.858	0.429	0.225	-1.499	0.284
0.300	9.040	9.899	0.421	0.212	-1.410	0.367
0.500	9.365	9.912	0.354	0.207	-0.738	0.395
0.700	9.573	9.880	0.306	0.218	-0.308	0.328
0.800	9.637	9.844	0.289	0.230	-0.175	0.253
0.850	9.650	9.814	0.286	0.239	-0.148	0.191
0.900	9.656	9.777	0.284	0.250	-0.136	0.115
0.950	9.665	9.716	0.282	0.268	-0.117	-0.011
SECTION C						
0.000	9.645	9.646	0.287	0.287	-0.157	-0.156
0.025	9.215	9.783	0.386	0.249	-1.047	0.127
0.050	9.116	9.648	0.406	0.286	-1.252	-0.153
0.075	9.061	9.707	0.417	0.270	-1.366	-0.029
0.100	9.034	9.751	0.422	0.258	-1.422	0.060
0.150	8.977	9.808	0.433	0.241	-1.540	0.179
0.200	8.982	9.860	0.432	0.225	-1.529	0.286
0.300	9.020	9.895	0.425	0.213	-1.451	0.360
0.500	9.322	9.902	0.363	0.211	-0.826	0.374
0.700	9.541	9.864	0.314	0.223	-0.374	0.296
0.800	9.612	9.826	0.296	0.236	-0.226	0.216
0.850	9.631	9.795	0.291	0.245	-0.186	0.152
0.900	9.642	9.756	0.288	0.257	-0.163	0.072
0.950	9.655	9.690	0.285	0.275	-0.138	-0.066
SECTION D						
0.000	9.579	9.580	0.304	0.304	-0.294	-0.293
0.025	9.306	9.746	0.367	0.259	-0.859	0.052
0.050	9.202	9.630	0.389	0.291	-1.074	-0.189
0.075	9.148	9.700	0.400	0.272	-1.186	-0.044
0.100	9.116	9.747	0.406	0.259	-1.252	0.052
0.150	9.068	9.816	0.416	0.239	-1.352	0.195
0.200	9.072	9.857	0.415	0.226	-1.344	0.281
0.300	9.113	9.894	0.407	0.213	-1.258	0.358
0.500	9.342	9.902	0.359	0.211	-0.785	0.374
0.700	9.515	9.856	0.320	0.226	-0.427	0.278
0.800	9.571	9.805	0.306	0.242	-0.311	0.172
0.850	9.585	9.770	0.302	0.253	-0.281	0.100
0.900	9.595	9.720	0.300	0.267	-0.260	-0.002
0.950	9.604	9.636	0.298	0.289	-0.243	-0.177

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(o) Vane A4 in corner 2; IGV setting, 0°; airflow, 69.31 kg/sec; readings 335–338

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.933	9.932	0.195	0.195	0.347	0.345
0.025	9.626	9.953	0.289	0.187	-0.425	0.397
0.050	9.575	9.794	0.302	0.241	-0.553	-0.002
0.075	9.514	9.836	0.317	0.228	-0.705	0.102
0.100	9.474	9.867	0.326	0.218	-0.805	0.180
0.150	9.404	9.891	0.343	0.210	-0.982	0.242
0.200	9.392	9.913	0.345	0.202	-1.012	0.297
0.300	9.378	9.940	0.348	0.192	-1.046	0.363
0.500	9.520	9.952	0.315	0.187	-0.690	0.394
0.700	9.666	9.917	0.278	0.201	-0.325	0.306
0.800	9.719	9.884	0.263	0.212	-0.190	0.223
0.850	9.733	9.858	0.259	0.221	-0.156	0.159
0.900	9.739	9.826	0.258	0.231	-0.140	0.079
0.950	9.732	9.775	0.260	0.247	-0.157	-0.050
SECTION B						
0.000	9.811	9.811	0.236	0.236	0.041	0.039
0.025	9.414	9.730	0.340	0.260	-0.957	-0.164
0.050	9.328	9.726	0.359	0.261	-1.173	-0.174
0.075	9.282	9.777	0.369	0.247	-1.289	-0.046
0.100	9.249	9.810	0.376	0.236	-1.372	0.038
0.150	9.195	9.879	0.388	0.214	-1.507	0.212
0.200	9.202	9.909	0.386	0.203	-1.490	0.287
0.300	9.237	9.942	0.379	0.191	-1.402	0.368
0.500	9.504	9.952	0.319	0.187	-0.730	0.394
0.700	9.674	9.926	0.276	0.197	-0.304	0.329
0.800	9.726	9.896	0.261	0.208	-0.174	0.253
0.850	9.737	9.871	0.258	0.216	-0.147	0.192
0.900	9.741	9.841	0.257	0.226	-0.135	0.117
0.950	9.749	9.791	0.255	0.242	-0.116	-0.010
SECTION C						
0.000	9.730	9.730	0.260	0.260	-0.164	-0.163
0.025	9.376	9.849	0.349	0.224	-1.051	0.136
0.050	9.295	9.737	0.366	0.258	-1.255	-0.147
0.075	9.250	9.787	0.376	0.244	-1.368	-0.021
0.100	9.228	9.820	0.381	0.233	-1.424	0.063
0.150	9.182	9.866	0.390	0.218	-1.540	0.179
0.200	9.185	9.908	0.390	0.204	-1.532	0.284
0.300	9.216	9.939	0.383	0.192	-1.454	0.361
0.500	9.467	9.944	0.328	0.191	-0.823	0.373
0.700	9.646	9.912	0.283	0.202	-0.373	0.295
0.800	9.704	9.881	0.267	0.213	-0.228	0.217
0.850	9.721	9.856	0.263	0.222	-0.186	0.152
0.900	9.730	9.824	0.260	0.232	-0.163	0.073
0.950	9.741	9.770	0.257	0.249	-0.137	-0.063
SECTION D						
0.000	9.672	9.673	0.276	0.276	-0.309	-0.307
0.025	9.453	9.818	0.331	0.234	-0.859	0.057
0.050	9.365	9.721	0.351	0.263	-1.079	-0.186
0.075	9.322	9.778	0.361	0.246	-1.188	-0.044
0.100	9.296	9.816	0.366	0.234	-1.253	0.053
0.150	9.255	9.871	0.375	0.217	-1.356	0.191
0.200	9.259	9.907	0.374	0.204	-1.347	0.280
0.300	9.291	9.936	0.367	0.193	-1.264	0.355
0.500	9.482	9.942	0.324	0.191	-0.786	0.370
0.700	9.625	9.904	0.289	0.205	-0.427	0.275
0.800	9.671	9.862	0.277	0.219	-0.312	0.169
0.850	9.682	9.835	0.274	0.229	-0.283	0.100
0.900	9.691	9.797	0.271	0.240	-0.262	0.005
0.950	9.698	9.725	0.269	0.262	-0.243	-0.175

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(p) Vane A4 in corner 2; IGV setting, 0°; airflow, 35.48 kg/sec; readings 339-342

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.083	10.083	0.096	0.096	0.374	0.371
0.025	10.003	10.089	0.143	0.091	-0.396	0.432
0.050	9.992	10.051	0.149	0.117	-0.509	0.069
0.075	9.977	10.064	0.156	0.109	-0.653	0.187
0.100	9.969	10.070	0.160	0.105	-0.731	0.250
0.150	9.952	10.077	0.167	0.101	-0.888	0.313
0.200	9.951	10.082	0.168	0.097	-0.900	0.364
0.300	9.949	10.088	0.169	0.092	-0.922	0.424
0.500	9.978	10.091	0.155	0.090	-0.635	0.451
0.700	10.021	10.082	0.134	0.096	-0.224	0.368
0.800	10.034	10.074	0.127	0.103	-0.103	0.285
0.850	10.037	10.068	0.126	0.107	-0.071	0.226
0.900	10.038	10.060	0.125	0.111	-0.060	0.156
0.950	10.037	10.047	0.126	0.119	-0.073	0.031
SECTION B						
0.000	10.052	10.052	0.117	0.117	0.076	0.072
0.025	9.959	10.039	0.164	0.124	-0.827	-0.050
0.050	9.938	10.038	0.173	0.125	-1.025	-0.057
0.075	9.927	10.050	0.178	0.118	-1.131	0.054
0.100	9.920	10.058	0.181	0.113	-1.204	0.135
0.150	9.907	10.069	0.186	0.106	-1.322	0.241
0.200	9.908	10.079	0.185	0.099	-1.311	0.340
0.300	9.919	10.087	0.181	0.093	-1.206	0.414
0.500	9.987	10.090	0.152	0.091	-0.557	0.442
0.700	10.023	10.083	0.133	0.096	-0.205	0.373
0.800	10.035	10.076	0.127	0.101	-0.089	0.309
0.850	10.037	10.070	0.125	0.105	-0.068	0.245
0.900	10.038	10.063	0.125	0.110	-0.058	0.182
0.950	10.041	10.050	0.123	0.118	-0.029	0.053
SECTION C						
0.000	10.031	10.031	0.129	0.129	-0.131	-0.133
0.025	9.948	10.064	0.169	0.109	-0.931	0.189
0.050	9.928	10.038	0.177	0.125	-1.119	-0.060
0.075	9.917	10.050	0.182	0.118	-1.229	0.054
0.100	9.912	10.058	0.184	0.113	-1.282	0.134
0.150	9.900	10.068	0.188	0.106	-1.395	0.231
0.200	9.901	10.075	0.188	0.102	-1.388	0.300
0.300	9.908	10.086	0.185	0.093	-1.312	0.407
0.500	9.975	10.084	0.157	0.095	-0.674	0.382
0.700	10.014	10.079	0.138	0.099	-0.291	0.337
0.800	10.029	10.072	0.130	0.104	-0.150	0.265
0.850	10.032	10.066	0.128	0.108	-0.114	0.210
0.900	10.035	10.058	0.127	0.113	-0.091	0.131
0.950	10.038	10.045	0.125	0.121	-0.060	0.003
SECTION D						
0.000	10.019	10.019	0.135	0.135	-0.244	-0.241
0.025	9.974	10.059	0.157	0.113	-0.677	0.138
0.050	9.949	10.034	0.169	0.127	-0.924	-0.095
0.075	9.937	10.048	0.173	0.119	-1.033	0.034
0.100	9.930	10.057	0.176	0.114	-1.100	0.122
0.150	9.920	10.068	0.181	0.107	-1.201	0.226
0.200	9.920	10.077	0.181	0.100	-1.200	0.316
0.300	9.926	10.084	0.178	0.095	-1.140	0.388
0.500	9.975	10.086	0.157	0.094	-0.671	0.401
0.700	10.009	10.077	0.141	0.101	-0.340	0.313
0.800	10.021	10.067	0.135	0.107	-0.228	0.216
0.850	10.023	10.060	0.133	0.112	-0.201	0.150
0.900	10.025	10.050	0.132	0.118	-0.184	0.058
0.950	10.027	10.035	0.131	0.127	-0.168	-0.094

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(q) Vane B in corner 2; IGV setting, −10°; airflow, 68.98 kg/sec; readings 9–19

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.833	9.833	0.227	0.228	0.104	0.103
0.025	9.720	9.822	0.262	0.231	-0.181	0.075
0.050	9.709	9.600	0.265	0.294	-0.210	-0.485
0.075	9.684	9.736	0.272	0.257	-0.272	-0.142
0.100	9.660	9.780	0.278	0.244	-0.332	-0.031
0.150	9.618	9.798	0.289	0.239	-0.439	0.015
0.200	9.585	9.807	0.298	0.236	-0.523	0.037
0.300	9.545	9.813	0.308	0.234	-0.623	0.052
0.500	9.534	9.814	0.311	0.234	-0.650	0.055
0.700	9.532	9.811	0.311	0.234	-0.657	0.049
0.800	9.555	9.812	0.306	0.234	-0.598	0.049
0.850	9.585	9.809	0.298	0.235	-0.522	0.042
0.900	9.639	9.800	0.284	0.238	-0.386	0.020
0.950	9.707	9.801	0.265	0.238	-0.214	0.023

SECTION B

0.000	9.585	9.585	0.298	0.298	-0.521	-0.523
0.025	9.499	10.014	0.319	0.160	-0.740	0.560
0.050	9.522	9.520	0.314	0.314	-0.680	-0.687
0.075	9.513	9.620	0.316	0.273	-0.704	-0.284
0.100	9.506	9.791	0.317	0.241	-0.721	-0.002
0.150	9.486	9.809	0.322	0.235	-0.772	0.042
0.200	9.476	9.820	0.325	0.232	-0.798	0.071
0.300	9.457	9.824	0.329	0.230	-0.844	0.081
0.500	9.472	9.835	0.326	0.227	-0.807	0.109
0.700	9.468	9.831	0.326	0.228	-0.816	0.097
0.800	9.493	9.822	0.321	0.231	-0.756	0.074
0.850	9.527	9.819	0.312	0.232	-0.669	0.068
0.900	9.600	9.806	0.294	0.236	-0.485	0.035
0.950	9.691	9.786	0.270	0.242	-0.255	-0.015

SECTION C

0.000	9.555	9.555	0.305	0.305	-0.598	-0.598
0.025	9.462	9.994	0.328	0.169	-0.833	0.510
0.050	9.492	9.526	0.321	0.313	-0.756	-0.671
0.075	9.479	9.633	0.324	0.285	-0.789	-0.400
0.100	9.480	9.804	0.324	0.237	-0.788	0.031
0.150	9.461	9.803	0.328	0.237	-0.836	0.027
0.200	9.449	9.815	0.331	0.233	-0.865	0.058
0.300	9.431	9.814	0.335	0.234	-0.912	0.054
0.500	9.452	9.818	0.330	0.232	-0.859	0.067
0.700	9.441	9.810	0.333	0.235	-0.885	0.045
0.800	9.476	9.813	0.325	0.234	-0.798	0.052
0.850	9.525	9.806	0.313	0.236	-0.674	0.035
0.900	9.609	9.788	0.292	0.242	-0.461	-0.010
0.950	9.686	9.744	0.271	0.255	-0.267	-0.121

SECTION D

0.000	9.674	9.673	0.274	0.275	-0.297	-0.299
0.025	9.633	9.931	0.286	0.193	-0.401	0.352
0.050	9.570	9.491	0.302	0.321	-0.560	-0.760
0.075	9.557	9.610	0.305	0.292	-0.594	-0.460
0.100	9.542	9.771	0.309	0.247	-0.632	-0.054
0.150	9.484	9.785	0.323	0.243	-0.778	-0.018
0.200	9.499	9.799	0.319	0.238	-0.739	0.018
0.300	9.516	9.804	0.315	0.237	-0.697	0.031
0.500	9.501	9.822	0.319	0.231	-0.734	0.077
0.700	9.499	9.826	0.319	0.230	-0.738	0.086
0.800	9.521	9.811	0.314	0.235	-0.684	0.047
0.850	9.558	9.806	0.305	0.236	-0.590	0.035
0.900	9.622	9.792	0.288	0.240	-0.430	-0.000
0.950	9.672	9.769	0.275	0.247	-0.302	-0.059

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(r) Vane B in corner 2; IGV setting, −10°; airflow, 35.35 kg/sec; readings 20–31

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.055	10.055	0.116	0.116	0.087	0.082
0.025	10.028	10.070	0.131	0.106	-0.181	0.232
0.050	10.028	10.011	0.131	0.140	-0.178	-0.338
0.075	10.022	10.042	0.135	0.123	-0.239	-0.037
0.100	10.016	10.052	0.137	0.117	-0.289	0.060
0.150	10.006	10.057	0.143	0.114	-0.393	0.107
0.200	9.997	10.060	0.147	0.113	-0.482	0.133
0.300	9.987	10.060	0.152	0.112	-0.577	0.135
0.500	9.984	10.061	0.153	0.112	-0.605	0.144
0.700	9.984	10.060	0.153	0.112	-0.608	0.135
0.800	9.990	10.061	0.150	0.112	-0.546	0.142
0.850	9.998	10.059	0.147	0.113	-0.470	0.128
0.900	10.013	10.057	0.139	0.114	-0.323	0.110
0.950	10.032	10.058	0.129	0.114	-0.136	0.116

SECTION B

0.000	9.993	9.993	0.149	0.149	-0.516	-0.520
0.025	9.976	10.121	0.157	0.063	-0.679	0.730
0.050	9.984	10.003	0.153	0.144	-0.603	-0.424
0.075	9.983	10.027	0.154	0.132	-0.617	-0.191
0.100	9.982	10.065	0.154	0.109	-0.626	0.184
0.150	9.977	10.065	0.156	0.109	-0.669	0.181
0.200	9.975	10.067	0.158	0.108	-0.692	0.204
0.300	9.973	10.068	0.159	0.107	-0.716	0.213
0.500	9.975	10.071	0.158	0.105	-0.693	0.240
0.700	9.974	10.070	0.158	0.106	-0.699	0.232
0.800	9.980	10.068	0.155	0.107	-0.648	0.212
0.850	9.985	10.067	0.153	0.108	-0.595	0.205
0.900	9.997	10.062	0.147	0.111	-0.482	0.151
0.950	10.028	10.059	0.131	0.113	-0.173	0.128

SECTION C

0.000	9.983	9.983	0.154	0.154	-0.617	-0.615
0.025	9.965	10.118	0.162	0.067	-0.794	0.697
0.050	9.974	10.001	0.158	0.145	-0.699	-0.443
0.075	9.973	10.027	0.159	0.132	-0.714	-0.184
0.100	9.972	10.051	0.159	0.118	-0.720	0.043
0.150	9.969	10.064	0.160	0.110	-0.755	0.176
0.200	9.967	10.067	0.161	0.108	-0.769	0.197
0.300	9.963	10.065	0.163	0.109	-0.808	0.186
0.500	9.969	10.067	0.160	0.108	-0.755	0.201
0.700	9.966	10.065	0.161	0.110	-0.777	0.179
0.800	9.972	10.066	0.159	0.109	-0.725	0.189
0.850	9.980	10.065	0.155	0.109	-0.641	0.186
0.900	10.000	10.062	0.146	0.111	-0.449	0.151
0.950	10.028	10.052	0.131	0.117	-0.175	0.060

SECTION D

0.000	10.023	10.024	0.134	0.134	-0.224	-0.221
0.025	10.009	10.095	0.141	0.088	-0.361	0.473
0.050	9.998	9.982	0.147	0.154	-0.472	-0.623
0.075	9.994	10.013	0.149	0.139	-0.506	-0.325
0.100	9.991	10.045	0.150	0.122	-0.539	-0.013
0.150	9.975	10.057	0.158	0.115	-0.697	0.101
0.200	9.979	10.059	0.156	0.113	-0.652	0.126
0.300	9.983	10.060	0.154	0.113	-0.613	0.130
0.500	9.980	10.065	0.155	0.109	-0.644	0.180
0.700	9.979	10.065	0.156	0.109	-0.652	0.184
0.800	9.985	10.062	0.153	0.111	-0.598	0.151
0.850	9.993	10.061	0.149	0.112	-0.515	0.148
0.900	10.010	10.059	0.141	0.113	-0.355	0.120
0.950	10.026	10.054	0.132	0.116	-0.197	0.072

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(s) Vane B in corner 2; IGV setting, 0°; airflow, 76.17 kg/sec; readings 41-44

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.826	9.826	0.237	0.237	0.205	0.206
0.025	9.675	9.781	0.280	0.251	-0.108	0.112
0.050	9.655	9.487	0.286	0.327	-0.149	-0.499
0.075	9.623	9.677	0.294	0.280	-0.216	-0.103
0.100	9.589	9.736	0.303	0.263	-0.287	0.019
0.150	9.532	9.762	0.317	0.256	-0.405	0.074
0.200	9.486	9.775	0.327	0.252	-0.499	0.100
0.300	9.430	9.782	0.340	0.250	-0.615	0.114
0.500	9.414	9.784	0.344	0.250	-0.648	0.118
0.700	9.411	9.780	0.345	0.251	-0.655	0.111
0.800	9.441	9.778	0.338	0.251	-0.594	0.106
0.850	9.477	9.776	0.330	0.252	-0.518	0.102
0.900	9.550	9.763	0.312	0.256	-0.367	0.075
0.950	9.641	9.765	0.289	0.255	-0.178	0.080

SECTION B

0.000	9.490	9.490	0.327	0.326	-0.493	-0.490
0.025	9.364	10.044	0.355	0.157	-0.752	0.658
0.050	9.394	9.369	0.349	0.354	-0.691	-0.742
0.075	9.382	9.650	0.351	0.287	-0.716	-0.159
0.100	9.370	9.741	0.354	0.262	-0.741	0.028
0.150	9.340	9.771	0.361	0.253	-0.803	0.092
0.200	9.325	9.786	0.364	0.249	-0.834	0.123
0.300	9.304	9.792	0.368	0.247	-0.876	0.135
0.500	9.321	9.807	0.365	0.243	-0.843	0.167
0.700	9.315	9.801	0.366	0.245	-0.854	0.153
0.800	9.351	9.787	0.358	0.249	-0.780	0.124
0.850	9.403	9.786	0.347	0.249	-0.673	0.122
0.900	9.503	9.763	0.323	0.256	-0.464	0.075
0.950	9.614	9.734	0.296	0.264	-0.235	0.014

SECTION C

0.000	9.449	9.449	0.336	0.336	-0.576	-0.576
0.025	9.315	10.021	0.366	0.167	-0.855	0.610
0.050	9.354	9.383	0.357	0.351	-0.773	-0.713
0.075	9.343	9.551	0.360	0.312	-0.797	-0.365
0.100	9.339	9.758	0.361	0.257	-0.805	0.064
0.150	9.311	9.765	0.367	0.255	-0.863	0.080
0.200	9.295	9.785	0.370	0.249	-0.896	0.121
0.300	9.269	9.781	0.376	0.250	-0.949	0.113
0.500	9.295	9.789	0.370	0.248	-0.896	0.129
0.700	9.281	9.776	0.373	0.252	-0.926	0.103
0.800	9.330	9.776	0.363	0.252	-0.823	0.101
0.850	9.401	9.768	0.347	0.255	-0.677	0.084
0.900	9.513	9.747	0.321	0.260	-0.443	0.043
0.950	9.605	9.683	0.298	0.278	-0.252	-0.090

SECTION D

0.000	9.593	9.593	0.302	0.302	-0.278	-0.279
0.025	9.513	9.929	0.321	0.203	-0.445	0.418
0.050	9.441	9.312	0.338	0.367	-0.593	-0.861
0.075	9.422	9.482	0.342	0.328	-0.632	-0.507
0.100	9.401	9.705	0.347	0.272	-0.675	-0.045
0.150	9.316	9.732	0.366	0.265	-0.851	0.010
0.200	9.336	9.752	0.361	0.259	-0.810	0.052
0.300	9.364	9.758	0.355	0.257	-0.753	0.064
0.500	9.339	9.785	0.361	0.249	-0.805	0.120
0.700	9.336	9.789	0.361	0.248	-0.810	0.129
0.800	9.371	9.767	0.354	0.255	-0.739	0.083
0.850	9.429	9.759	0.341	0.257	-0.618	0.066
0.900	9.521	9.737	0.319	0.263	-0.428	0.022
0.950	9.577	9.695	0.305	0.275	-0.310	-0.066

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(t) Vane B in corner 2; IGV setting, 0°; airflow, 73.99 kg/sec; readings 36–40

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.834	9.834	0.233	0.233	0.184	0.184
0.025	9.687	9.796	0.276	0.245	-0.140	0.099
0.050	9.667	9.505	0.281	0.322	-0.183	-0.540
0.075	9.636	9.690	0.290	0.275	-0.253	-0.133
0.100	9.603	9.749	0.298	0.259	-0.324	-0.003
0.150	9.546	9.774	0.312	0.251	-0.449	0.052
0.200	9.502	9.786	0.323	0.248	-0.546	0.078
0.300	9.449	9.793	0.335	0.246	-0.662	0.092
0.500	9.434	9.795	0.339	0.245	-0.695	0.098
0.700	9.430	9.791	0.340	0.246	-0.703	0.090
0.800	9.457	9.794	0.333	0.245	-0.645	0.096
0.850	9.498	9.787	0.324	0.248	-0.554	0.080
0.900	9.568	9.775	0.307	0.251	-0.400	0.054
0.950	9.656	9.777	0.284	0.251	-0.207	0.058
SECTION B						
0.000	9.507	9.507	0.322	0.322	-0.535	-0.535
0.025	9.390	10.048	0.349	0.153	-0.791	0.653
0.050	9.420	9.398	0.342	0.347	-0.726	-0.774
0.075	9.407	9.656	0.345	0.284	-0.755	-0.209
0.100	9.397	9.756	0.347	0.257	-0.777	0.012
0.150	9.369	9.785	0.353	0.248	-0.838	0.075
0.200	9.354	9.799	0.357	0.244	-0.870	0.107
0.300	9.334	9.805	0.361	0.242	-0.915	0.120
0.500	9.350	9.820	0.357	0.238	-0.879	0.152
0.700	9.345	9.813	0.359	0.240	-0.890	0.138
0.800	9.378	9.800	0.351	0.244	-0.817	0.109
0.850	9.427	9.799	0.340	0.244	-0.711	0.106
0.900	9.522	9.779	0.318	0.250	-0.502	0.062
0.950	9.632	9.752	0.291	0.258	-0.260	0.003
SECTION C						
0.000	9.470	9.470	0.330	0.330	-0.617	-0.615
0.025	9.342	10.025	0.359	0.163	-0.897	0.604
0.050	9.380	9.413	0.351	0.344	-0.813	-0.742
0.075	9.367	9.567	0.354	0.307	-0.842	-0.402
0.100	9.365	9.774	0.354	0.251	-0.847	0.051
0.150	9.338	9.779	0.360	0.250	-0.905	0.062
0.200	9.323	9.796	0.363	0.245	-0.939	0.100
0.300	9.298	9.794	0.369	0.246	-0.993	0.095
0.500	9.324	9.801	0.363	0.243	-0.936	0.110
0.700	9.311	9.790	0.366	0.247	-0.967	0.086
0.800	9.358	9.790	0.356	0.247	-0.863	0.086
0.850	9.425	9.782	0.341	0.249	-0.715	0.070
0.900	9.534	9.759	0.315	0.256	-0.476	0.018
0.950	9.625	9.697	0.292	0.273	-0.276	-0.117
SECTION D						
0.000	9.616	9.616	0.295	0.295	-0.297	-0.296
0.025	9.522	9.939	0.318	0.198	-0.503	0.413
0.050	9.474	9.355	0.329	0.356	-0.608	-0.869
0.075	9.456	9.515	0.334	0.320	-0.647	-0.517
0.100	9.435	9.729	0.338	0.264	-0.693	-0.047
0.150	9.357	9.752	0.356	0.258	-0.865	0.003
0.200	9.375	9.770	0.352	0.253	-0.825	0.044
0.300	9.401	9.777	0.346	0.251	-0.768	0.057
0.500	9.379	9.801	0.351	0.243	-0.817	0.111
0.700	9.375	9.805	0.352	0.242	-0.824	0.119
0.800	9.406	9.785	0.345	0.248	-0.757	0.075
0.850	9.460	9.777	0.333	0.251	-0.639	0.058
0.900	9.546	9.757	0.312	0.256	-0.450	0.015
0.950	9.603	9.719	0.298	0.267	-0.324	-0.069

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(u) Vane B in corner 2; IGV setting, 0°; airflow, 69.17 kg/sec; readings 8–18

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.831	9.830	0.228	0.228	0.104	0.103
0.025	9.720	9.824	0.262	0.230	-0.174	0.088
0.050	9.709	9.602	0.265	0.293	-0.201	-0.470
0.075	9.685	9.739	0.271	0.256	-0.262	-0.125
0.100	9.661	9.781	0.278	0.244	-0.322	-0.021
0.150	9.620	9.799	0.289	0.238	-0.426	0.025
0.200	9.587	9.808	0.297	0.235	-0.508	0.047
0.300	9.547	9.813	0.307	0.234	-0.608	0.060
0.500	9.536	9.815	0.310	0.233	-0.636	0.064
0.700	9.534	9.812	0.311	0.234	-0.641	0.057
0.800	9.558	9.812	0.305	0.234	-0.581	0.057
0.850	9.588	9.807	0.297	0.236	-0.506	0.044
0.900	9.642	9.801	0.283	0.237	-0.371	0.029
0.950	9.709	9.803	0.265	0.237	-0.203	0.034

SECTION B

0.000	9.588	9.587	0.297	0.297	-0.506	-0.507
0.025	9.502	10.014	0.318	0.160	-0.722	0.563
0.050	9.525	9.523	0.313	0.313	-0.663	-0.670
0.075	9.517	9.682	0.315	0.272	-0.684	-0.269
0.100	9.509	9.793	0.317	0.240	-0.703	0.009
0.150	9.489	9.811	0.322	0.234	-0.755	0.054
0.200	9.479	9.821	0.324	0.231	-0.779	0.080
0.300	9.461	9.826	0.328	0.230	-0.824	0.092
0.500	9.475	9.836	0.325	0.226	-0.788	0.118
0.700	9.472	9.832	0.326	0.228	-0.797	0.108
0.800	9.495	9.823	0.320	0.231	-0.738	0.084
0.850	9.530	9.821	0.312	0.231	-0.652	0.081
0.900	9.602	9.808	0.293	0.235	-0.470	0.046
0.950	9.693	9.788	0.269	0.241	-0.242	-0.003

SECTION C

0.000	9.556	9.557	0.305	0.305	-0.584	-0.584
0.025	9.464	9.995	0.327	0.168	-0.816	0.517
0.050	9.495	9.529	0.320	0.312	-0.738	-0.654
0.075	9.485	9.636	0.322	0.285	-0.765	-0.385
0.100	9.483	9.806	0.323	0.236	-0.770	0.042
0.150	9.464	9.805	0.327	0.236	-0.817	0.039
0.200	9.453	9.817	0.330	0.232	-0.845	0.070
0.300	9.434	9.816	0.334	0.233	-0.891	0.066
0.500	9.455	9.821	0.330	0.231	-0.840	0.080
0.700	9.445	9.812	0.332	0.234	-0.865	0.057
0.800	9.479	9.814	0.324	0.233	-0.779	0.061
0.850	9.529	9.807	0.312	0.235	-0.654	0.045
0.900	9.613	9.790	0.291	0.241	-0.443	0.001
0.950	9.689	9.746	0.270	0.254	-0.252	-0.109

SECTION D

0.000	9.676	9.675	0.274	0.274	-0.285	-0.286
0.025	9.636	9.932	0.285	0.193	-0.385	0.358
0.050	9.572	9.494	0.301	0.320	-0.546	-0.741
0.075	9.556	9.612	0.305	0.291	-0.585	-0.445
0.100	9.545	9.702	0.308	0.246	-0.614	-0.044
0.150	9.487	9.787	0.322	0.242	-0.760	-0.007
0.200	9.501	9.801	0.319	0.238	-0.725	0.029
0.300	9.519	9.805	0.314	0.236	-0.679	0.039
0.500	9.504	9.823	0.318	0.230	-0.717	0.086
0.700	9.502	9.827	0.318	0.229	-0.721	0.095
0.800	9.524	9.812	0.313	0.234	-0.666	0.058
0.850	9.561	9.808	0.304	0.235	-0.573	0.046
0.900	9.624	9.794	0.288	0.240	-0.416	0.011
0.950	9.674	9.770	0.274	0.247	-0.290	-0.048

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(v) Vane B in corner 2; IGV setting, 0°; airflow, 56.55 kg/sec; readings 32-35

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.955	9.955	0.177	0.177	0.180	0.178
0.025	9.880	9.960	0.205	0.175	-0.105	0.198
0.050	9.674	9.809	0.207	0.229	-0.128	-0.375
0.075	9.858	9.898	0.213	0.199	-0.188	-0.037
0.100	9.842	9.927	0.218	0.188	-0.250	0.074
0.150	9.813	9.939	0.228	0.183	-0.358	0.120
0.200	9.791	9.945	0.235	0.180	-0.441	0.143
0.300	9.764	9.949	0.243	0.179	-0.544	0.158
0.500	9.757	9.950	0.245	0.178	-0.573	0.162
0.700	9.755	9.948	0.246	0.179	-0.577	0.154
0.800	9.772	9.949	0.241	0.179	-0.515	0.156
0.850	9.792	9.946	0.234	0.180	-0.437	0.147
0.900	9.829	9.942	0.222	0.182	-0.297	0.129
0.950	9.875	9.942	0.207	0.182	-0.125	0.131

SECTION B

0.000	9.791	9.790	0.235	0.235	-0.444	-0.447
0.025	9.736	10.092	0.251	0.108	-0.651	0.699
0.050	9.753	9.765	0.246	0.243	-0.587	-0.540
0.075	9.748	9.851	0.248	0.215	-0.606	-0.213
0.100	9.743	9.943	0.249	0.181	-0.625	0.135
0.150	9.729	9.952	0.253	0.178	-0.675	0.167
0.200	9.723	9.956	0.255	0.176	-0.699	0.183
0.300	9.714	9.962	0.258	0.174	-0.732	0.207
0.500	9.720	9.970	0.256	0.170	-0.712	0.235
0.700	9.722	9.967	0.256	0.171	-0.705	0.226
0.800	9.735	9.961	0.252	0.174	-0.653	0.204
0.850	9.756	9.961	0.246	0.174	-0.576	0.201
0.900	9.800	9.952	0.232	0.178	-0.408	0.168
0.950	9.868	9.940	0.209	0.183	-0.150	0.121

SECTION C

0.000	9.764	9.764	0.243	0.243	-0.544	-0.543
0.025	9.707	10.078	0.260	0.116	-0.761	0.648
0.050	9.728	9.761	0.254	0.244	-0.680	-0.556
0.075	9.723	9.832	0.255	0.221	-0.702	-0.285
0.100	9.718	9.952	0.257	0.178	-0.719	0.167
0.150	9.708	9.947	0.260	0.180	-0.755	0.148
0.200	9.702	9.955	0.261	0.176	-0.780	0.181
0.300	9.690	9.954	0.265	0.177	-0.827	0.176
0.500	9.705	9.958	0.260	0.175	-0.767	0.190
0.700	9.699	9.952	0.262	0.178	-0.792	0.167
0.800	9.719	9.954	0.256	0.177	-0.714	0.174
0.850	9.751	9.949	0.247	0.179	-0.594	0.157
0.900	9.808	9.934	0.229	0.185	-0.378	0.102
0.950	9.868	9.909	0.209	0.195	-0.151	0.004

SECTION D

0.000	9.856	9.856	0.213	0.214	-0.195	-0.197
0.025	9.812	10.034	0.228	0.141	-0.361	0.481
0.050	9.788	9.741	0.236	0.250	-0.454	-0.632
0.075	9.779	9.820	0.239	0.225	-0.488	-0.331
0.100	9.769	9.925	0.241	0.188	-0.524	0.066
0.150	9.731	9.935	0.253	0.184	-0.669	0.105
0.200	9.740	9.945	0.250	0.181	-0.634	0.140
0.300	9.752	9.947	0.247	0.180	-0.591	0.150
0.500	9.743	9.960	0.249	0.175	-0.623	0.198
0.700	9.742	9.963	0.250	0.173	-0.629	0.208
0.800	9.756	9.953	0.246	0.177	-0.575	0.173
0.850	9.779	9.951	0.238	0.178	-0.487	0.164
0.900	9.821	9.943	0.225	0.182	-0.328	0.133
0.950	9.858	9.929	0.213	0.187	-0.187	0.082

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(w) Vane B in corner 2; IGV setting, 0°; airflow, 35.15 kg/sec; readings 22-29

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.056	10.055	0.115	0.115	0.087	0.080
0.025	10.028	10.071	0.131	0.105	-0.191	0.229
0.050	10.028	10.012	0.131	0.140	-0.192	-0.348
0.075	10.022	10.042	0.135	0.123	-0.251	-0.048
0.100	10.016	10.053	0.137	0.117	-0.305	0.060
0.150	10.005	10.057	0.143	0.114	-0.411	0.099
0.200	9.998	10.060	0.147	0.112	-0.487	0.124
0.300	9.987	10.060	0.152	0.112	-0.595	0.127
0.500	9.984	10.061	0.153	0.112	-0.623	0.135
0.700	9.984	10.061	0.154	0.112	-0.627	0.131
0.800	9.991	10.060	0.150	0.112	-0.557	0.124
0.850	9.998	10.060	0.147	0.112	-0.484	0.125
0.900	10.013	10.058	0.139	0.113	-0.334	0.109
0.950	10.032	10.058	0.129	0.113	-0.147	0.111

SECTION B

0.000	9.993	9.993	0.149	0.149	-0.530	-0.531
0.025	9.977	10.121	0.157	0.063	-0.695	0.728
0.050	9.985	10.002	0.153	0.145	-0.616	-0.443
0.075	9.983	10.026	0.154	0.132	-0.632	-0.206
0.100	9.982	10.063	0.154	0.110	-0.646	0.156
0.150	9.977	10.065	0.156	0.109	-0.686	0.178
0.200	9.975	10.067	0.157	0.108	-0.707	0.194
0.300	9.972	10.068	0.159	0.107	-0.738	0.206
0.500	9.975	10.071	0.157	0.105	-0.711	0.231
0.700	9.975	10.070	0.158	0.106	-0.715	0.224
0.800	9.976	10.068	0.157	0.107	-0.697	0.206
0.850	9.986	10.067	0.152	0.108	-0.605	0.192
0.900	9.998	10.065	0.147	0.109	-0.488	0.176
0.950	10.029	10.059	0.131	0.113	-0.183	0.121

SECTION C

0.000	9.984	9.984	0.153	0.153	-0.623	-0.623
0.025	9.965	10.118	0.162	0.066	-0.811	0.698
0.050	9.975	10.002	0.158	0.145	-0.712	-0.444
0.075	9.974	10.028	0.158	0.131	-0.723	-0.187
0.100	9.973	10.052	0.158	0.117	-0.732	0.046
0.150	9.969	10.065	0.160	0.109	-0.765	0.174
0.200	9.967	10.067	0.161	0.108	-0.787	0.199
0.300	9.964	10.063	0.162	0.110	-0.817	0.158
0.500	9.970	10.067	0.160	0.108	-0.761	0.199
0.700	9.967	10.065	0.161	0.109	-0.788	0.179
0.800	9.973	10.067	0.158	0.108	-0.729	0.190
0.850	9.981	10.065	0.155	0.109	-0.647	0.179
0.900	9.999	10.062	0.146	0.111	-0.474	0.148
0.950	10.029	10.054	0.131	0.116	-0.183	0.064

SECTION D

0.000	10.023	10.023	0.134	0.134	-0.241	-0.235
0.025	10.009	10.094	0.141	0.088	-0.374	0.460
0.050	9.998	9.982	0.147	0.154	-0.486	-0.637
0.075	9.991	10.013	0.150	0.139	-0.554	-0.340
0.100	9.991	10.046	0.150	0.121	-0.558	-0.016
0.150	9.975	10.056	0.158	0.115	-0.715	0.087
0.200	9.979	10.059	0.156	0.113	-0.673	0.115
0.300	9.984	10.060	0.154	0.112	-0.627	0.125
0.500	9.976	10.065	0.157	0.109	-0.697	0.170
0.700	9.979	10.065	0.155	0.109	-0.668	0.174
0.800	9.985	10.062	0.153	0.111	-0.615	0.143
0.850	9.993	10.061	0.149	0.112	-0.531	0.134
0.900	10.009	10.058	0.141	0.114	-0.371	0.107
0.950	10.026	10.053	0.132	0.117	-0.212	0.059

TABLE X.—Continued. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(x) Vane B in corner 2; IGV setting, 10°; airflow, 68.28 kg/sec; readings 10–17

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	9.835	9.835	0.227	0.227	0.092	0.091
0.025	9.725	9.824	0.260	0.230	-0.192	0.061
0.050	9.713	9.605	0.264	0.293	-0.223	-0.501
0.075	9.690	9.742	0.270	0.255	-0.283	-0.148
0.100	9.666	9.783	0.277	0.243	-0.345	-0.044
0.150	9.624	9.801	0.288	0.238	-0.453	0.004
0.200	9.591	9.810	0.296	0.235	-0.537	0.027
0.300	9.552	9.815	0.306	0.233	-0.638	0.040
0.500	9.540	9.817	0.309	0.233	-0.668	0.044
0.700	9.539	9.814	0.310	0.233	-0.672	0.038
0.800	9.562	9.814	0.304	0.234	-0.613	0.035
0.850	9.591	9.809	0.296	0.235	-0.538	0.023
0.900	9.644	9.803	0.282	0.237	-0.400	0.009
0.950	9.711	9.805	0.264	0.236	-0.228	0.013

SECTION B

0.000	9.590	9.591	0.297	0.296	-0.539	-0.537
0.025	9.505	10.015	0.318	0.159	-0.760	0.554
0.050	9.526	9.527	0.313	0.312	-0.706	-0.702
0.075	9.520	9.688	0.314	0.271	-0.720	-0.289
0.100	9.513	9.794	0.316	0.240	-0.739	-0.014
0.150	9.492	9.813	0.321	0.234	-0.792	0.033
0.200	9.483	9.823	0.323	0.231	-0.816	0.060
0.300	9.468	9.827	0.327	0.229	-0.854	0.071
0.500	9.480	9.838	0.324	0.226	-0.824	0.098
0.700	9.475	9.833	0.325	0.227	-0.835	0.086
0.800	9.499	9.824	0.319	0.230	-0.775	0.063
0.850	9.533	9.823	0.311	0.231	-0.687	0.060
0.900	9.604	9.810	0.293	0.235	-0.504	0.026
0.950	9.696	9.791	0.269	0.241	-0.268	-0.023

SECTION C

0.000	9.562	9.562	0.304	0.304	-0.613	-0.613
0.025	9.469	9.995	0.326	0.168	-0.851	0.502
0.050	9.502	9.534	0.319	0.311	-0.768	-0.685
0.075	9.490	9.639	0.321	0.284	-0.798	-0.413
0.100	9.488	9.808	0.322	0.235	-0.804	0.021
0.150	9.468	9.807	0.327	0.236	-0.854	0.017
0.200	9.457	9.819	0.329	0.232	-0.881	0.050
0.300	9.439	9.817	0.333	0.232	-0.928	0.045
0.500	9.459	9.823	0.329	0.231	-0.876	0.061
0.700	9.449	9.814	0.331	0.234	-0.902	0.036
0.800	9.484	9.816	0.323	0.233	-0.814	0.041
0.850	9.532	9.810	0.311	0.235	-0.688	0.025
0.900	9.616	9.792	0.290	0.240	-0.474	-0.020
0.950	9.692	9.749	0.270	0.253	-0.279	-0.131

SECTION D

0.000	9.677	9.677	0.274	0.274	-0.315	-0.315
0.025	9.637	9.932	0.284	0.193	-0.418	0.340
0.050	9.575	9.497	0.301	0.320	-0.580	-0.781
0.075	9.558	9.614	0.305	0.291	-0.622	-0.479
0.100	9.547	9.773	0.307	0.246	-0.650	-0.070
0.150	9.489	9.788	0.321	0.242	-0.799	-0.031
0.200	9.502	9.802	0.318	0.237	-0.766	0.005
0.300	9.521	9.807	0.314	0.236	-0.718	0.018
0.500	9.506	9.825	0.317	0.230	-0.755	0.064
0.700	9.505	9.828	0.318	0.229	-0.760	0.072
0.800	9.527	9.814	0.312	0.234	-0.703	0.036
0.850	9.563	9.809	0.303	0.235	-0.609	0.024
0.900	9.626	9.796	0.287	0.239	-0.449	-0.010
0.950	9.676	9.771	0.274	0.247	-0.320	-0.073

TABLE X.—Concluded. VANE SURFACE STATIC-PRESSURE DISTRIBUTION

[Pressures are in newtons per square centimeter.]

(y) Vane B in corner 2; IGV setting, 10°; airflow, 35.36 kg/sec; readings 21–30

SECTION A

	PRESSURE, N/CM2		MACH NO		COEFFICIENT	
XC/C	SUCT	PRESS	SUCT	PRESS	SUCT	PRESS
0.000	10.055	10.056	0.115	0.115	0.089	0.092
0.025	10.028	10.069	0.131	0.107	-0.180	0.219
0.050	10.028	10.011	0.131	0.140	-0.179	-0.344
0.075	10.021	10.042	0.135	0.124	-0.240	-0.045
0.100	10.016	10.052	0.138	0.117	-0.293	0.059
0.150	10.006	10.057	0.143	0.114	-0.394	0.104
0.200	9.997	10.059	0.147	0.113	-0.478	0.124
0.300	9.987	10.060	0.152	0.112	-0.576	0.137
0.500	9.984	10.061	0.153	0.112	-0.605	0.144
0.700	9.984	10.060	0.154	0.112	-0.608	0.138
0.800	9.990	10.061	0.150	0.112	-0.543	0.141
0.850	9.998	10.059	0.147	0.113	-0.470	0.128
0.900	10.013	10.058	0.139	0.114	-0.322	0.113
0.950	10.032	10.058	0.129	0.114	-0.138	0.117

SECTION B

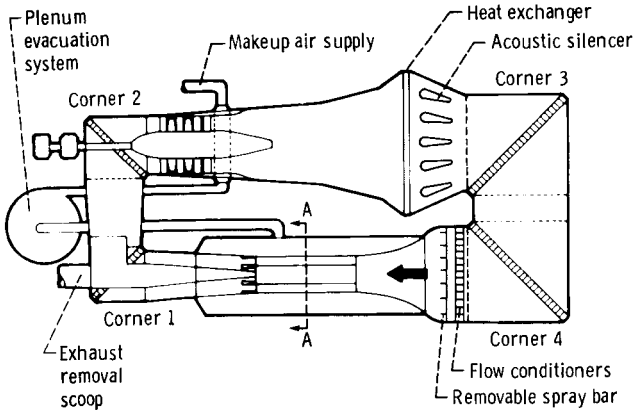
0.000	9.993	9.992	0.149	0.149	-0.517	-0.522
0.025	9.976	10.121	0.157	0.063	-0.681	0.726
0.050	9.984	10.002	0.153	0.145	-0.603	-0.426
0.075	9.982	10.027	0.154	0.132	-0.619	-0.188
0.100	9.982	10.065	0.154	0.109	-0.627	0.184
0.150	9.977	10.065	0.157	0.109	-0.672	0.180
0.200	9.975	10.067	0.157	0.108	-0.688	0.204
0.300	9.972	10.068	0.159	0.107	-0.719	0.211
0.500	9.972	10.071	0.159	0.106	-0.725	0.237
0.700	9.971	10.069	0.159	0.106	-0.728	0.226
0.800	9.979	10.067	0.156	0.108	-0.651	0.207
0.850	9.985	10.067	0.153	0.108	-0.594	0.200
0.900	9.997	10.064	0.147	0.110	-0.483	0.171
0.950	10.028	10.059	0.131	0.113	-0.174	0.128

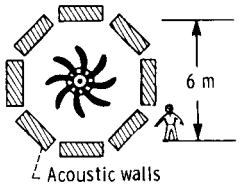
SECTION C

0.000	9.983	9.984	0.154	0.154	-0.612	-0.607
0.025	9.964	10.118	0.162	0.066	-0.795	0.700
0.050	9.974	10.001	0.158	0.145	-0.704	-0.440
0.075	9.973	10.028	0.159	0.131	-0.715	-0.181
0.100	9.972	10.051	0.159	0.118	-0.717	0.049
0.150	9.969	10.065	0.160	0.110	-0.753	0.179
0.200	9.967	10.067	0.161	0.108	-0.771	0.200
0.300	9.963	10.066	0.163	0.109	-0.808	0.188
0.500	9.969	10.065	0.160	0.109	-0.753	0.185
0.700	9.966	10.065	0.162	0.109	-0.777	0.184
0.800	9.972	10.066	0.159	0.109	-0.720	0.191
0.850	9.978	10.065	0.156	0.109	-0.661	0.180
0.900	9.999	10.062	0.146	0.111	-0.460	0.150
0.950	10.028	10.053	0.131	0.117	-0.172	0.064

SECTION D

0.000	10.023	10.023	0.134	0.134	-0.226	-0.222
0.025	10.008	10.094	0.142	0.088	-0.367	0.468
0.050	9.997	9.982	0.147	0.154	-0.478	-0.624
0.075	9.994	10.012	0.149	0.139	-0.506	-0.328
0.100	9.991	10.046	0.150	0.121	-0.541	-0.005
0.150	9.974	10.056	0.158	0.115	-0.698	0.095
0.200	9.979	10.059	0.156	0.113	-0.657	0.126
0.300	9.983	10.060	0.154	0.113	-0.610	0.130
0.500	9.980	10.065	0.155	0.109	-0.648	0.181
0.700	9.979	10.065	0.156	0.109	-0.654	0.184
0.800	9.981	10.062	0.155	0.111	-0.629	0.154
0.850	9.993	10.061	0.149	0.112	-0.519	0.145
0.900	10.009	10.058	0.141	0.114	-0.357	0.118
0.950	10.026	10.053	0.132	0.117	-0.199	0.071





Section A-A: Test section

Mach number	0 to 0.9+
Altitude, m	0 to 17 000+
Total temperature, ^{o}C	-40 to 15
Test-section acoustic level, dB (OASPL)	120

Figure 1.—Capabilities of modified and rehabilitated AWT.

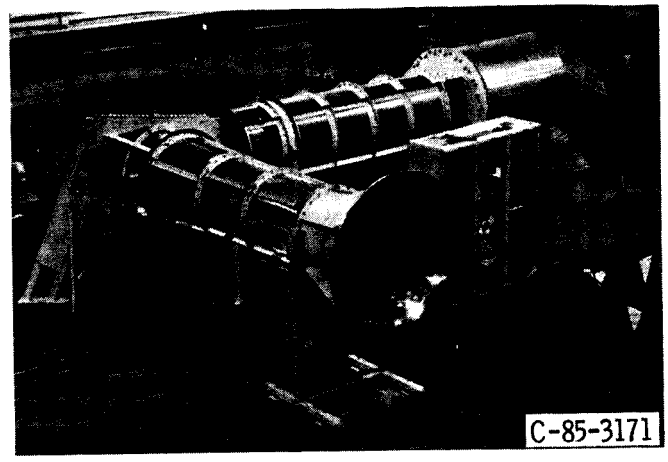


Figure 2.—Corner 2 test configuration.

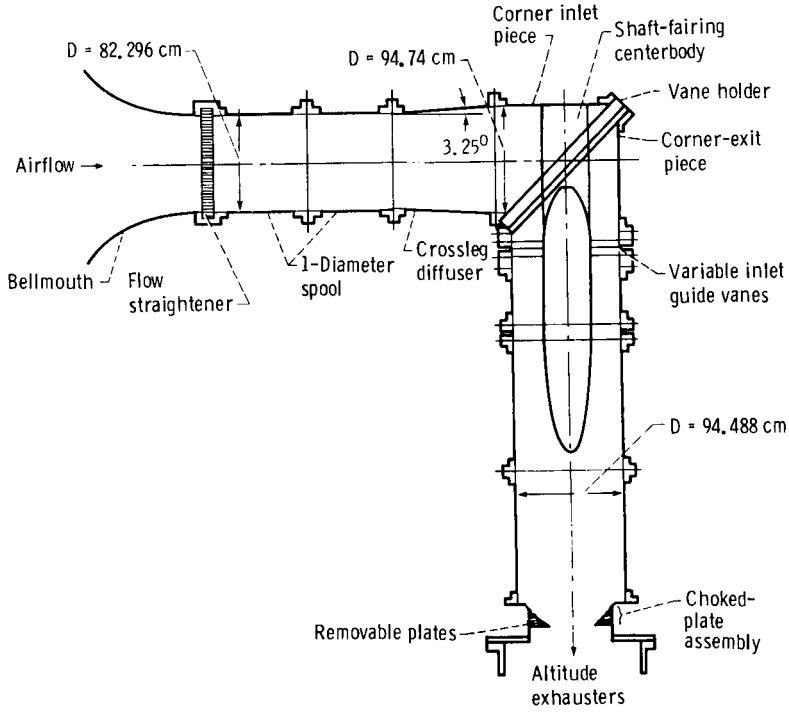


Figure 3.—Schematic of corner 2 test apparatus.

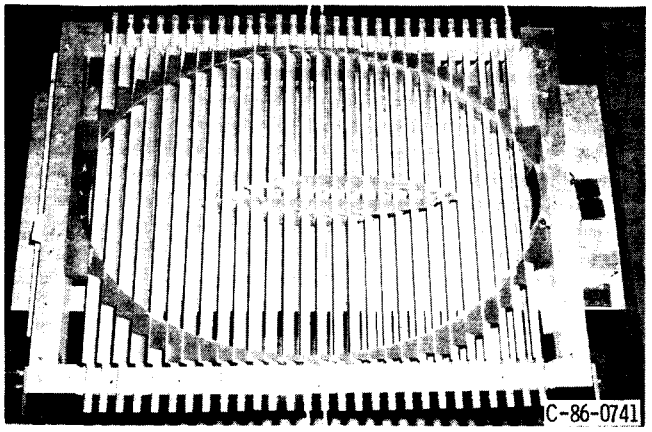


Figure 4.—Corner 2 vane holder showing foam fillers.

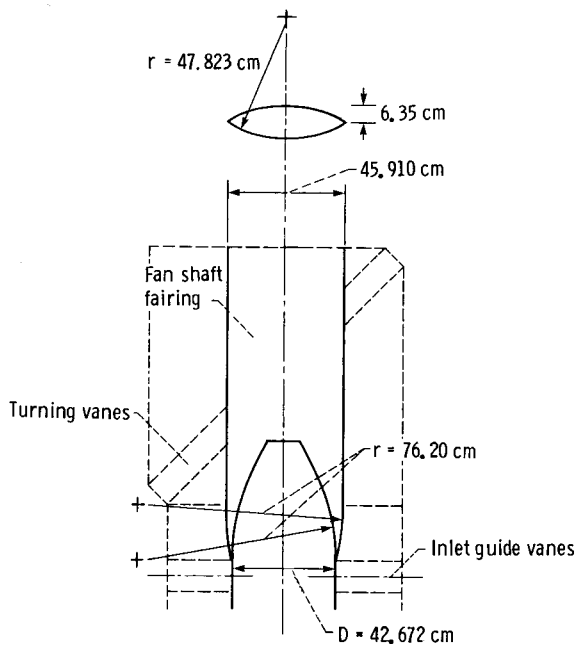
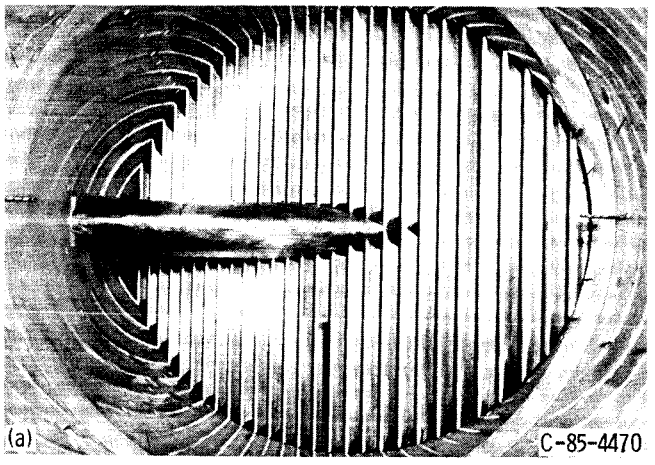
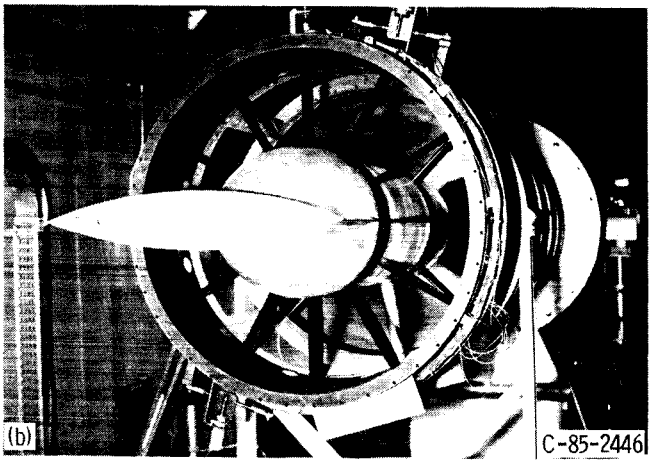


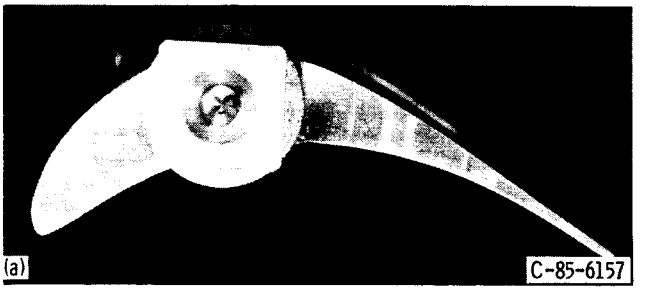
Figure 6.—Geometry of fan shaft fairing in corner 2. (Dimensions are in centimeters.)

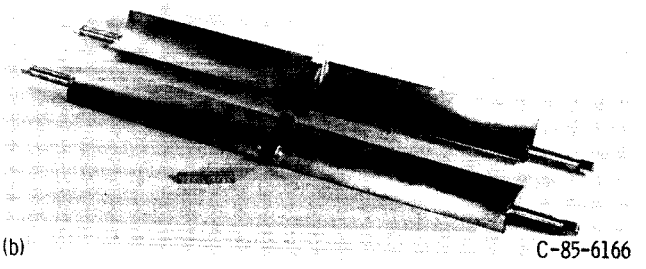




(a) Inlet.
(b) Exit to fan inlet guide vanes.

Figure 5.—Fan shaft fairing.





(a) End view.
(b) 3/4 view.

Figure 7.—Vane A (controlled-diffusion).

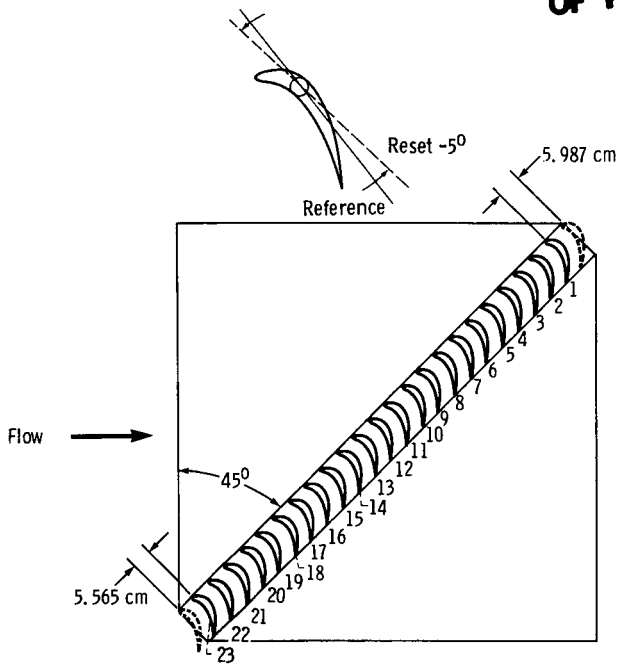
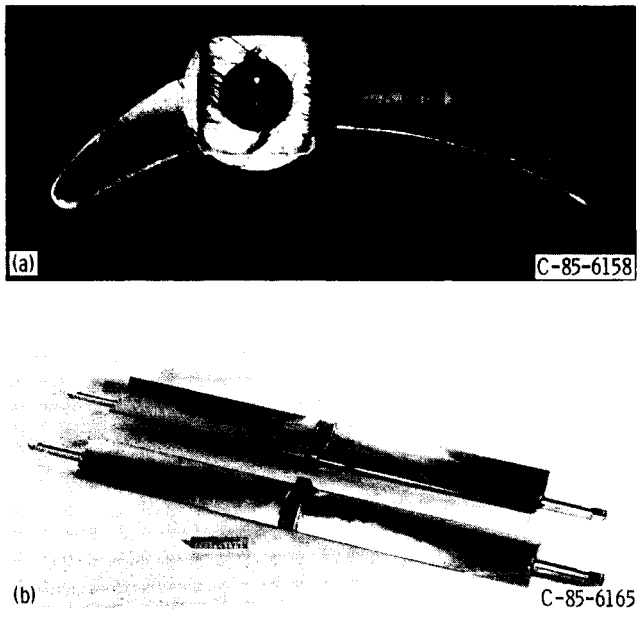


Figure 8.—Schematic showing Vane A in corner 2 (along major axis).



(a) End view.
(b) 3/4 view.

Figure 9.—Vane B (circular-arc).

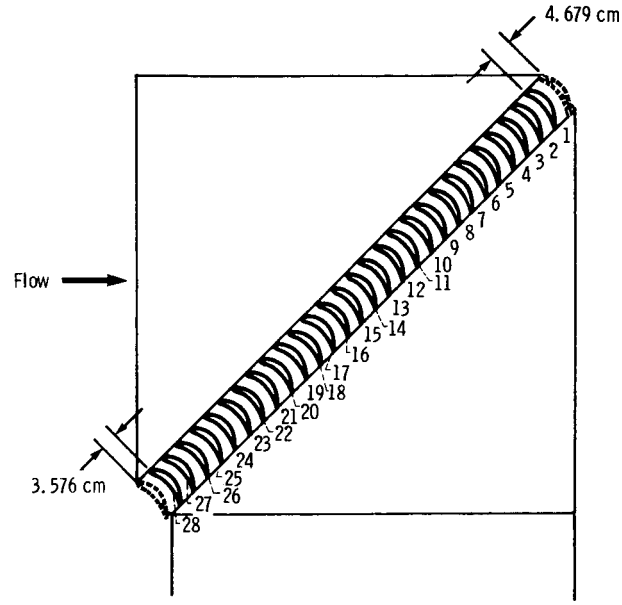
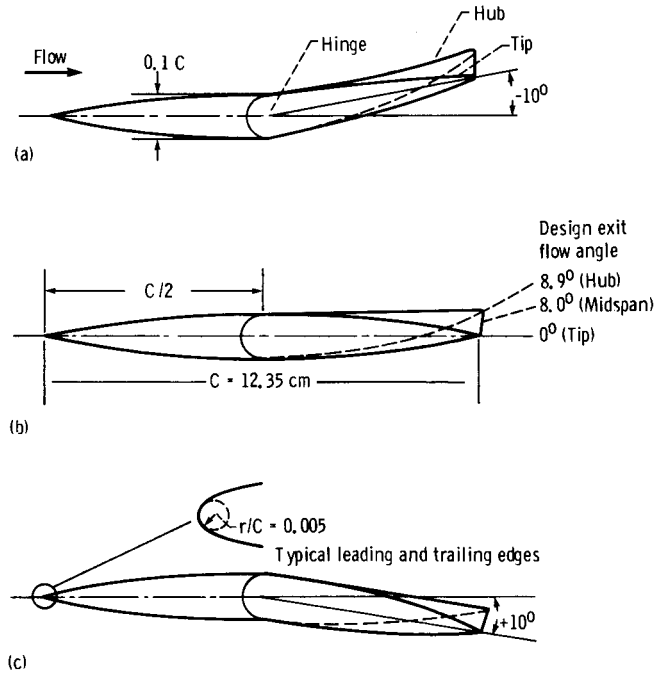


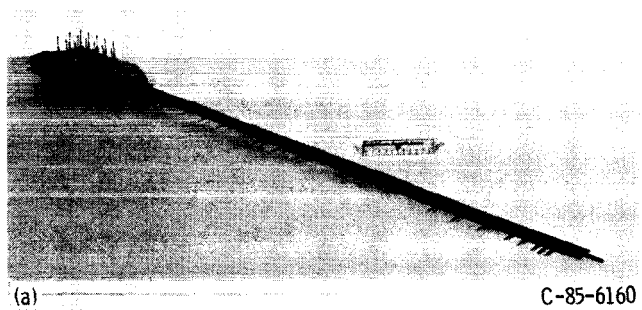
Figure 10.—Schematic showing Vane B in corner 2 (along major axis).

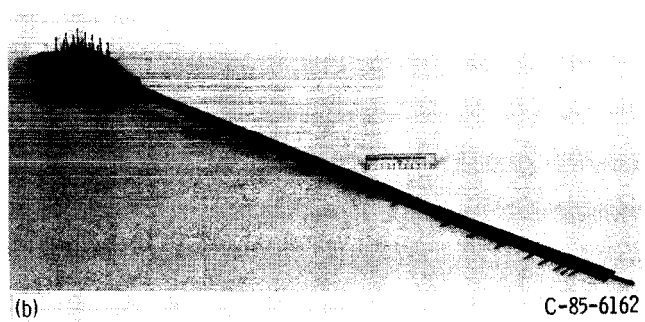


(a) Inlet guide vane angle, design −10°.
(b) Inlet guide vane angle, design.
(c) Inlet guide vane angle, design +10°.

Figure 11.—Inlet guide vane with twist at trailing edge.

Element	Type	Distance from outer wall to centerline, percent of span	Distance from outer wall, cm	
			Inlet	Exit
1	Pressure	5.0	2.075	2.314
2	Temperature	7.5	3.114	3.470
3	Pressure	10.0	4.150	4.628
4	↓	15.0	6.226	6.939
5		20.0	8.301	9.253
6		30.0	12.451	13.881
7	Temperature	40.0	16.601	18.506
8	Pressure	50.0	20.752	23.134
9	Pressure	70.0	29.053	32.388
10	Temperature	80.0	33.209	37.013
11	Pressure	90.0	37.353	41.641
12	Pressure	90.0	45.654	50.891
13	Temperature	80.0	49.804	55.519
14	Pressure	70.0	53.955	60.144
15	Pressure	50.0	62.255	69.398
16	Temperature	40.0	66.406	74.026
17	Pressure	30.0	70.556	78.651
18		20.0	74.706	83.279
19	↓	15.0	76.782	85.593
20		10.0	78.857	87.904
21	Temperature	7.5	79.893	89.063
22	Pressure	5.0	80.932	90.216





(a) Inlet.
(b) Exit.

Figure 12.—Diffuser diametrical rakes.

Static pressure tap locations

Inlet			Exit			
Station	X, cm	Circumferential locations, θ, deg	Station	Z, cm	Circumferential location, θ, deg	
					Outer wall	Shaft fairing
1	−152.375	90	54	−99.619	----------	0,90,180,270
2	−135.915	↓	55	−90.145	----------	0,90,180,270
3	−116.916	↓	56	−80.670	----------	0,90,180
4	−102.997	↓	57	−71.196	270	90,180
5	−86.538	↓	58	−61.722	270	90,270
6	−70.079	↓	59	−52.248	270	90
7	−53.619	↓	60	−42.774	270	90
8	−37.160	↓	61	−33.299	0,180,270	0,180,270
9	−20.701	↓	62	−23.824	↓	0,180,270
10	−4.115	↓	63	−21.285	↓	0,90,180,270
33	0	↓	64	−18.745	↓	↓
*34	6.198	0,90,180,270	65	−16.205	↓	↓
35	8.306	90	66	−13.665	↓	↓
36	11.684	90	67	−11.125	↓	↓
37	15.062	0,90,180,270	68	−8.585	↓	↓
38	18.440	90	69	−6.045	↓	↓
39	21.819	90	70	−3.505	↓	↓
40	25.222	0,90,180,270	71	−0.965	↓	↓
41	35.382	↓	72	1.575	0,90,180,270	↓
42	45.542	↓	73	4.115	↓	↓
43	53.702	↓	74	6.655	↓	↓
44	--------	↓	75	9.195	↓	↓
45	76.022	↓	76	11.735	↓	↓
46	86.192	↓	77	14.275	↓	↓
*47	90.221	↓	78	16.815	↓	↓
48	109.703	0,180,270	*79	19.609	↓	↓
49	119.177	↓	*80	36.627	12½,57½,	12½,57½,
50	128.651	↓			102½,147½	102½,147½
51	138.125	↓			192½,237½	192½,237½
52	147.599	0,180			282½,327½	282½,327½
53	194.970	270				

*Rake location.

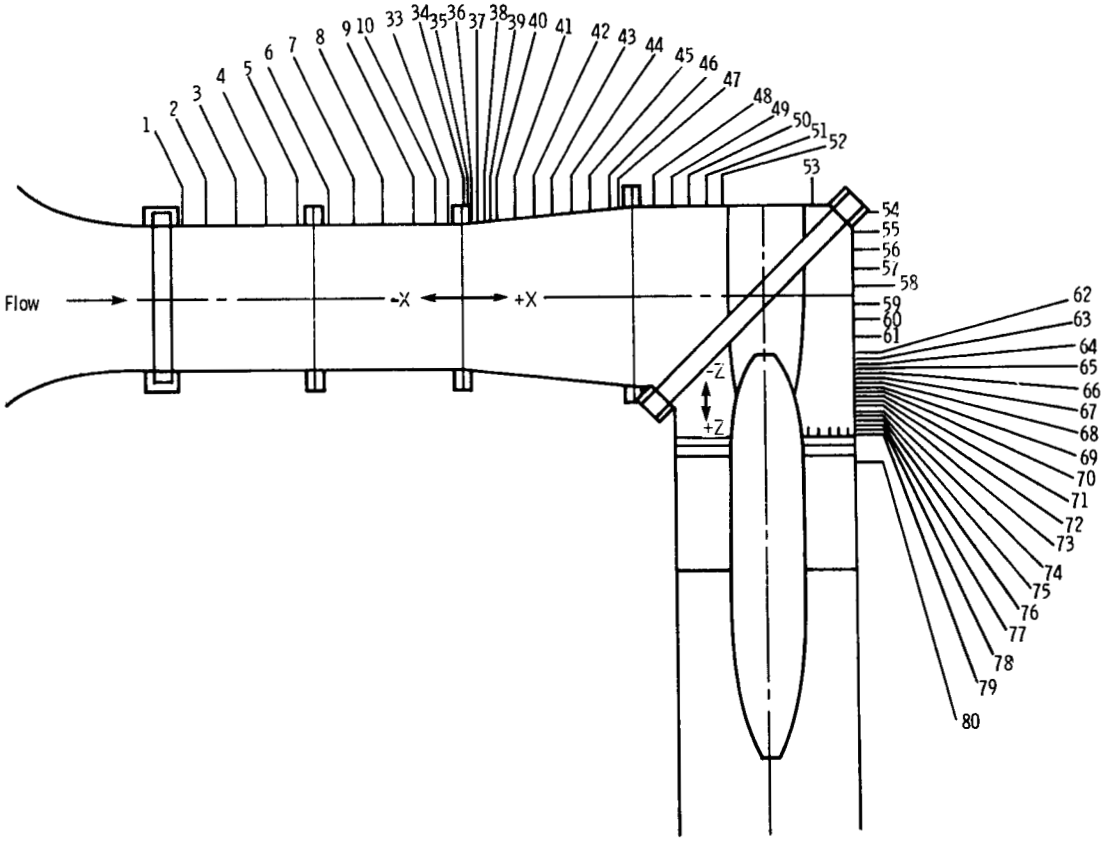
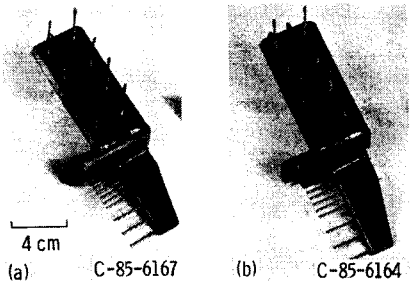


Figure 13.—Instrumentation locations.

Element	Distance from outer wall to centerline, percent of span	Distance from outer wall, cm	
		Inlet	Exit
1	1.0	0.414	0.462
2	2.0	.831	.925
3	3.0	1.245	1.387
4	4.0	1.661	1.852
5	5.0	2.075	2.314
6	7.5	3.114	3.470
7	10.0	4.150	4.628
8	12.5	5.189	5.784



(a) Inlet. (b) Exit.

Figure 14.—Diffuser boundary-layer rakes.

Element	Distance from outer wall to inner wall, percent of span	Distance from outer wall, cm
1	10	3.785
2	30	8.966
3	50	14.148
4	70	19.329
5	90	24.511

Figure 15.—IGV leading-edge rake.

Element	Type	Distance from outer wall to inner wall, percent of span	Distance from outer wall, cm
1	Pressure	5.0	1.295
2	Temperature	7.5	1.943
3	Pressure	10.0	2.591
4	↓	15.0	3.886
5		20.0	5.207
6		30.0	7.772
7	Temperature	40.0	10.363
8	Pressure	50.0	12.954
9	Pressure	70.0	18.136
10	Temperature	80.0	20.726
11	Pressure	90.0	23.317

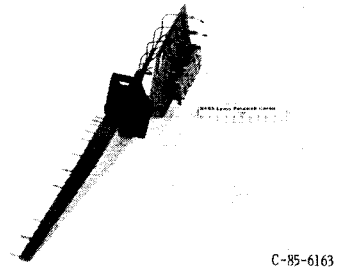
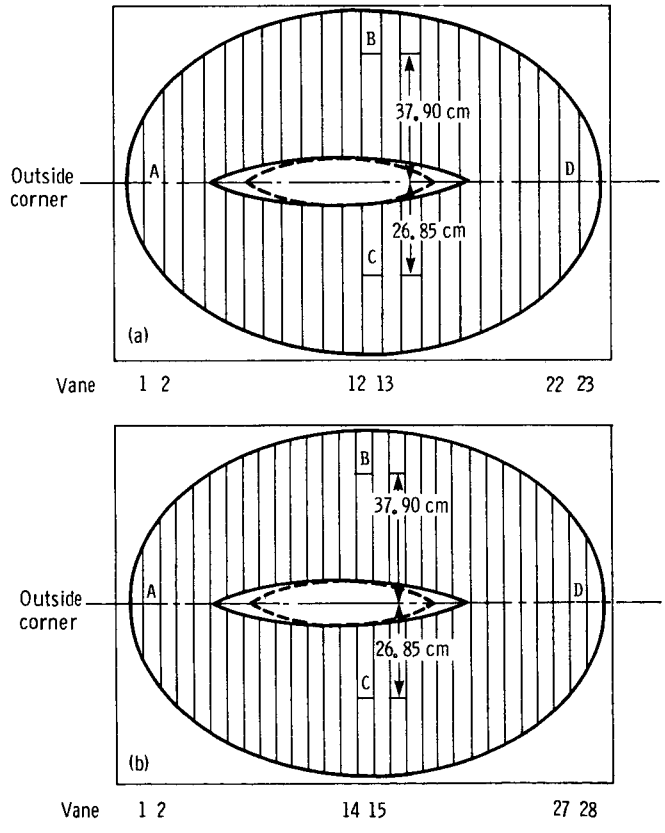
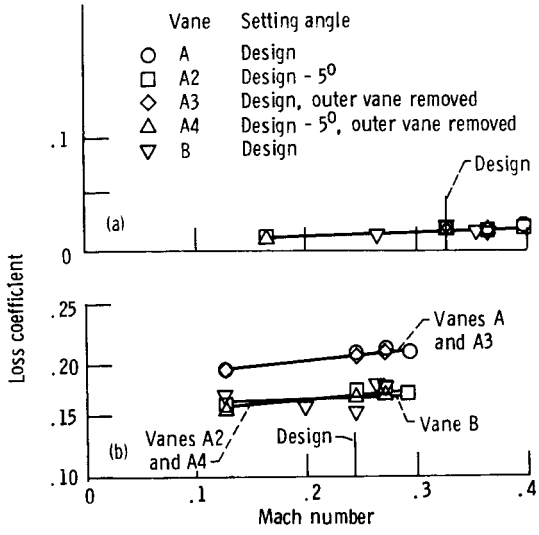


Figure 16.—IGV exit rake.



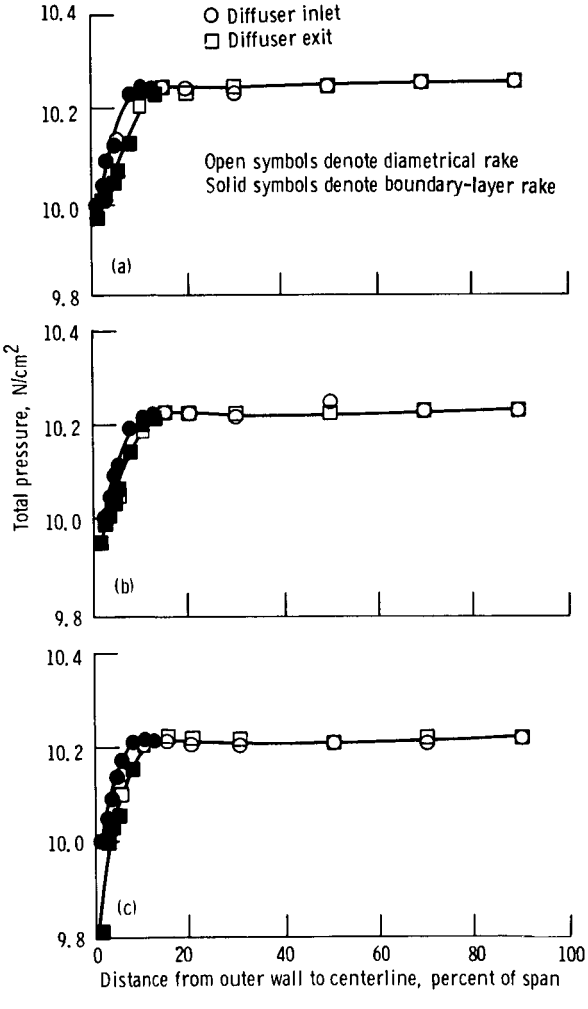
(a) Vane A. (b) Vane B.

Figure 17.—Location for vane surface static taps (looking downstream).



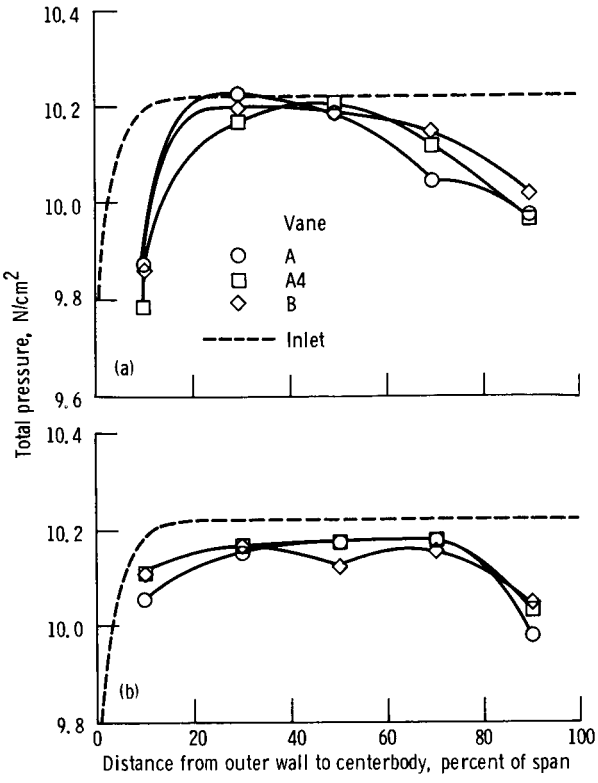
(a) Diffuser. (b) Corner 2.

Figure 18.—Component loss coefficient as function of inlet Mach number. Data fairing based on least-squares fit.



(a) Vane A. (b) Vane A4. (c) Vane B.

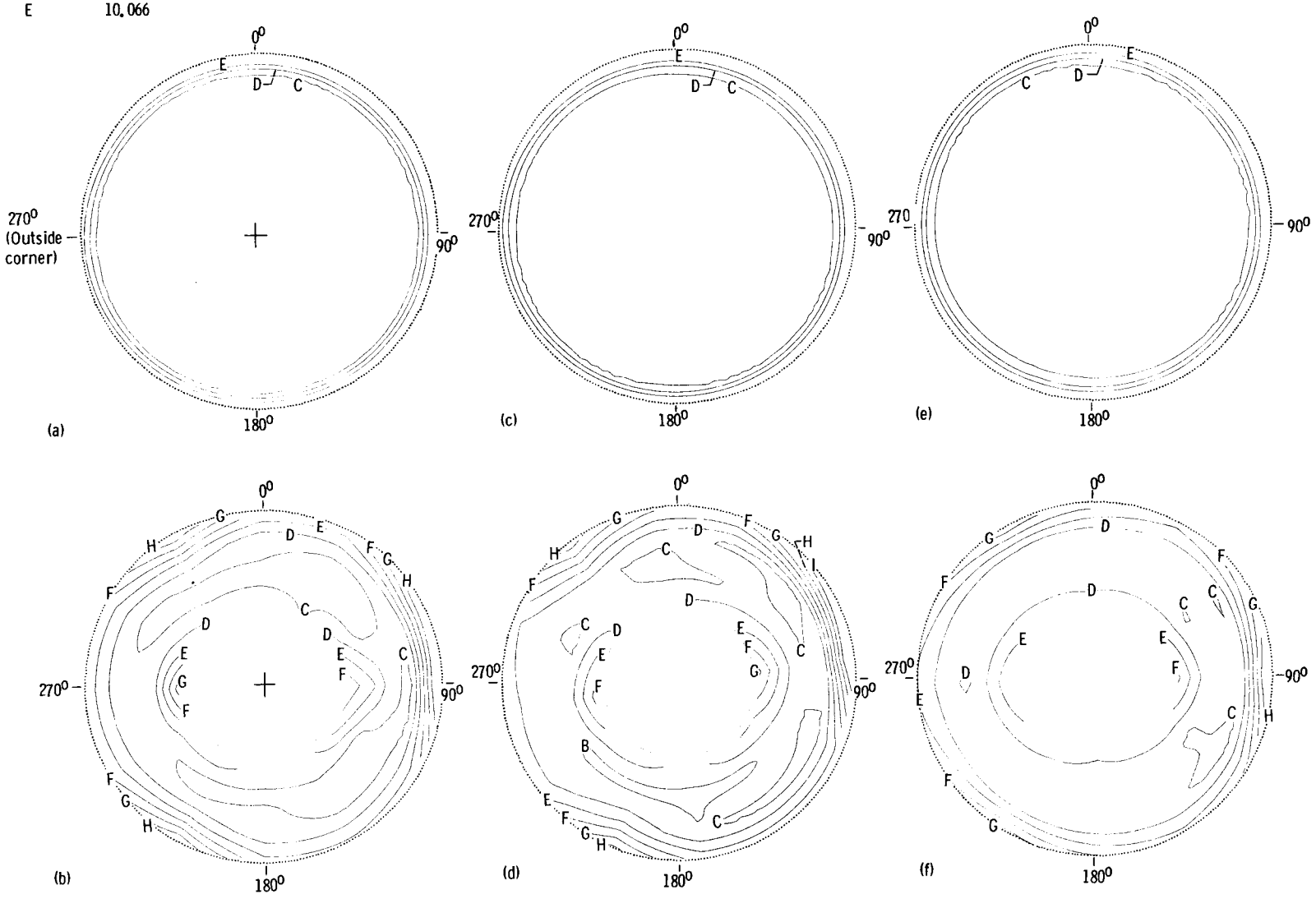
Figure 19.—Total pressure profiles at diffuser inlet and exit (inlet of corner 2). Circumferential position, 0°; nominal diffuser inlet Mach number, 0.33.



(a) Circumferential position, 90° (inside corner).
(b) Circumferential position, 270° (outside corner).

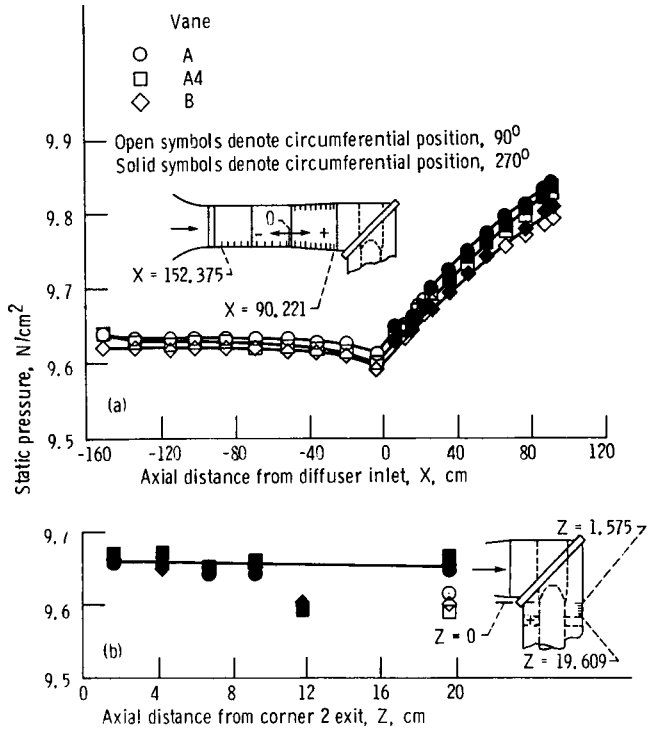
Figure 20.—Corner 2 exit total-pressure profiles for vanes A, A4, and B. Nominal corner 2 inlet Mach number, 0.24.

	N/cm²		N/cm²
A	10.342	F	9.997
B	10.273	G	9.929
C	10.204	H	9.860
D	10.135	I	9.791
E	10.066		



(a) Diffuser exit, Vane A (looking downstream).
(b) Corner 2 exit, Vane A (looking downstream).
(c) Diffuser exit, Vane A4 (looking downstream).
(d) Corner 2 exit, Vane A4 (looking downstream).
(e) Diffuser exit, Vane B (looking downstream).
(f) Corner 2 exit, Vane B (looking downstream).

Figure 21.—Diffuser exit and corner 2 exit total-pressure contours. Nominal airflow, 69.2 kg/sec; nominal corner 2 inlet Mach number, 0.24.



(a) Upstream.
(b) Downstream.

Figure 22.—Axial wall static-pressure distributions upstream and downstream of corner 2. Nominal airflow, 69.2 kg/sec; nominal corner 2 inlet Mach number, 0.24.

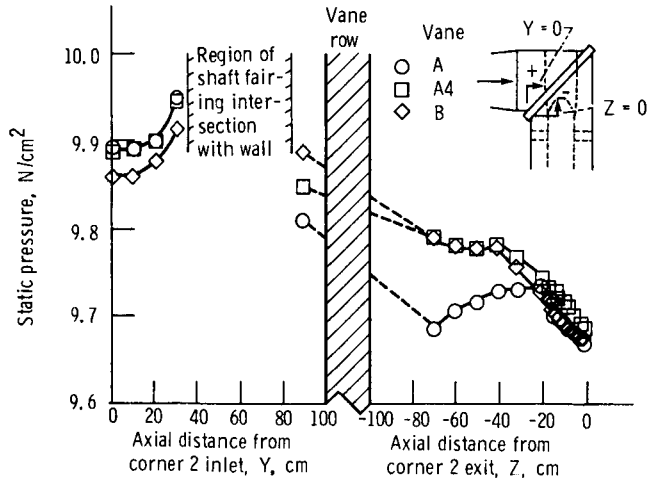
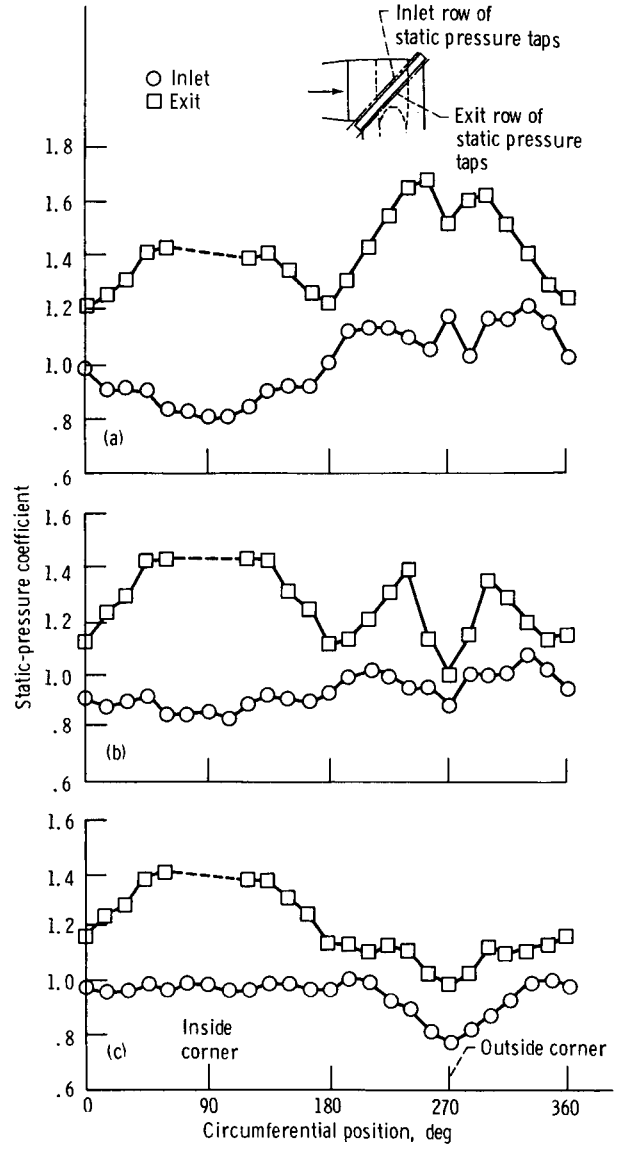


Figure 23.—Axial wall static-pressure distribution in corner 2. Circumferential position, 270°; nominal airflow, 69.2 kg/sec; nominal inlet Mach number, 0.24.



(a) Vane A. (b) Vane A4. (c) Vane B.

Figure 24.—Circumferential distribution of static-pressure coefficient upstream and downstream of corner 2 vane row. Nominal airflow, 69.2 kg/sec; nominal corner 2 inlet Mach number, 0.24.

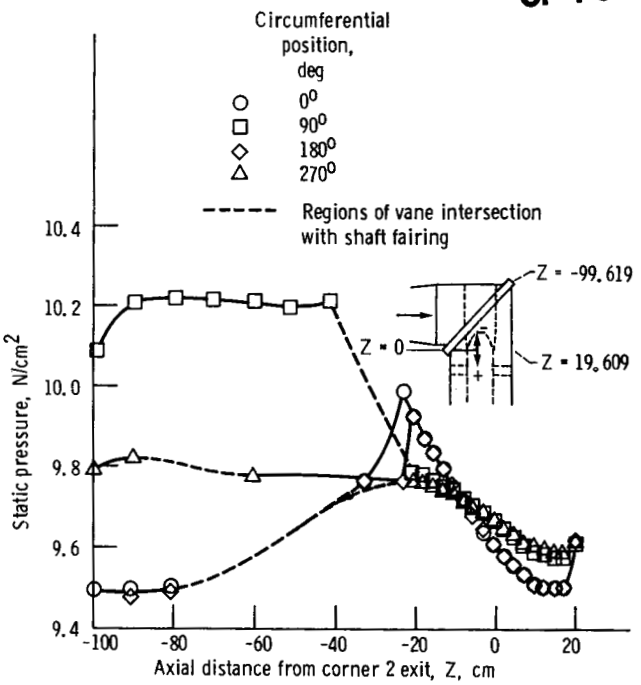
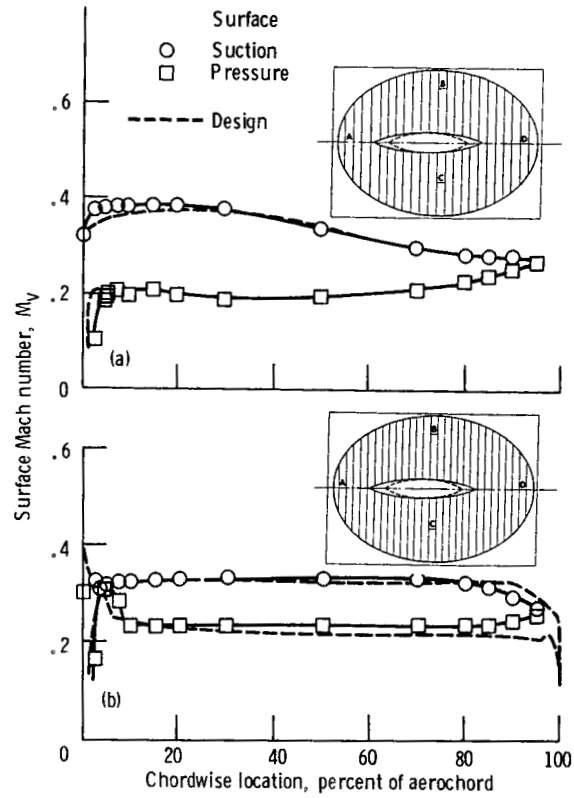
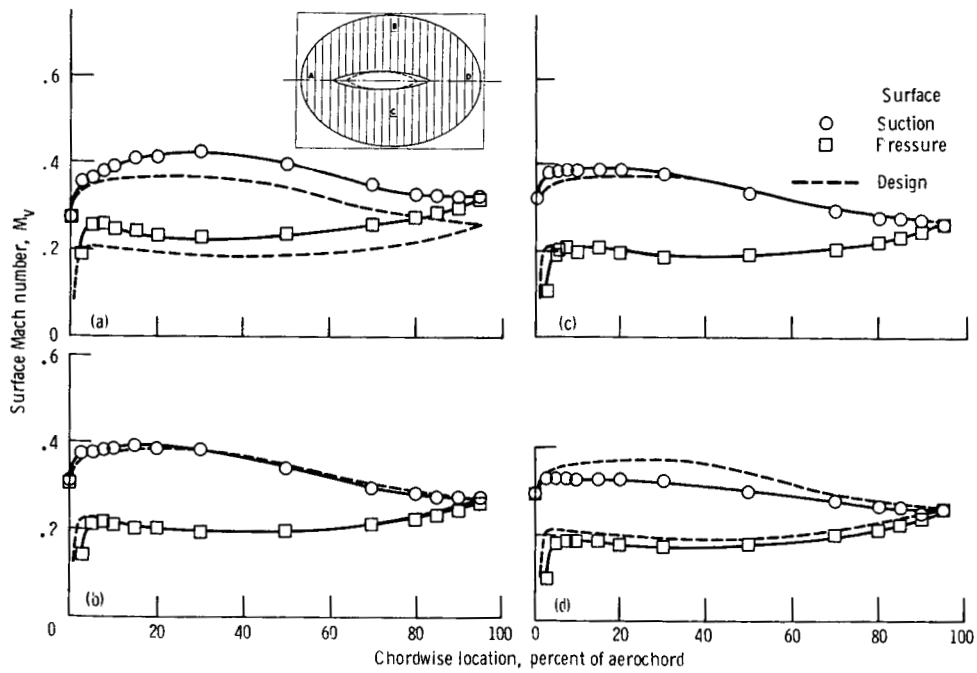


Figure 25.—Axial static-pressure distribution on shaft fairing centerbody for vane A4. Nominal airflow, 69.2 kg/sec.



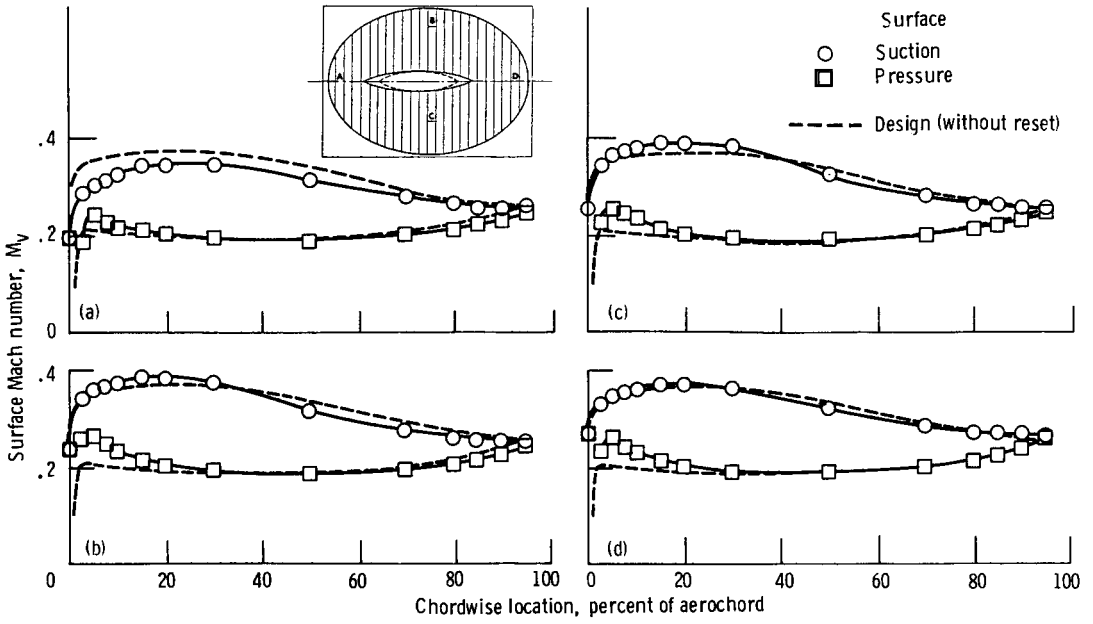
(a) Vane A. (b) Vane B.

Figure 26.—Measured and design Mach number distributions for vanes A and B in corner 2. Section C; nominal corner 2 inlet Mach number, 0.24.



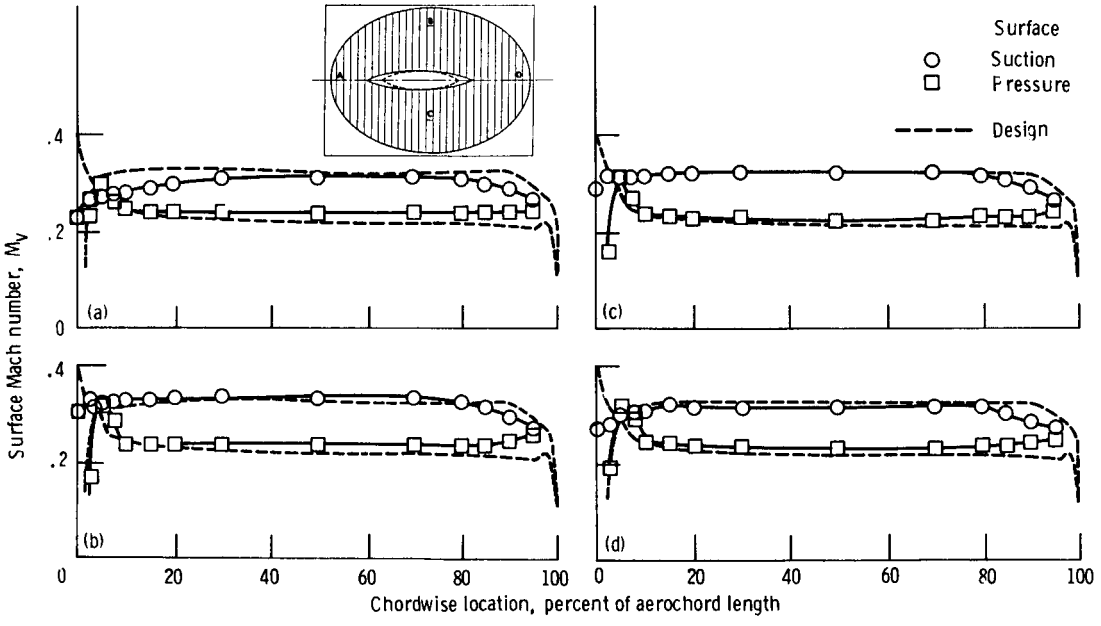
(a) Section A. (c) Section C.
(b) Section B. (d) Section D.

Figure 27.—Surface Mach number distributions for Vane A in corner 2. Nominal corner 2 inlet Mach number, 0.24.



(a) Section A. (c) Section C.
(b) Section B. (d) Section D.

Figure 28.—Surface Mach number distributions for Vane A4 in corner 2. Nominal corner 2 inlet Mach number, 0.24.



(a) Section A. (c) Section C.
(b) Section B. (d) Section D.

Figure 29.—Surface Mach number distributions for Vane B in corner 2. Nominal corner 2 inlet Mach number, 0.24.

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15. Supplementary Notes

16. Abstract

Two turning vane designs were experimentally evaluated for corner 2 of a 0.1-scale model of the NASA Lewis Research Center's proposed Altitude Wind Tunnel (AWT). Corner 2 contained a simulated shaft fairing for a fan drive system to be located downstream of the corner. The corner was tested with a bellmouth inlet followed by a 0.1-scale model of the crossleg diffuser designed to connect corners 1 and 2 of the AWT. Vane A was a controlled-diffusion airfoil shape; vane B was a circular-arc airfoil shape. The A vanes were tested in several arrangements which included the resetting of the vane angle by $-5°$ or the removal of the outer vane. The lowest total-pressure loss for vane A configurations was obtained at the negative reset angle. The loss coefficient increased slightly with Mach number, ranging from 0.165 to 0.175 with a loss coefficient of 0.170 at the inlet design Mach number of 0.24. Removal of the outer vane did not alter the loss. Vane B loss coefficients were essentially the same as those for the reset vane A configurations. The crossleg diffuser loss coefficient was 0.018 at the inlet design Mach number of 0.33.

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